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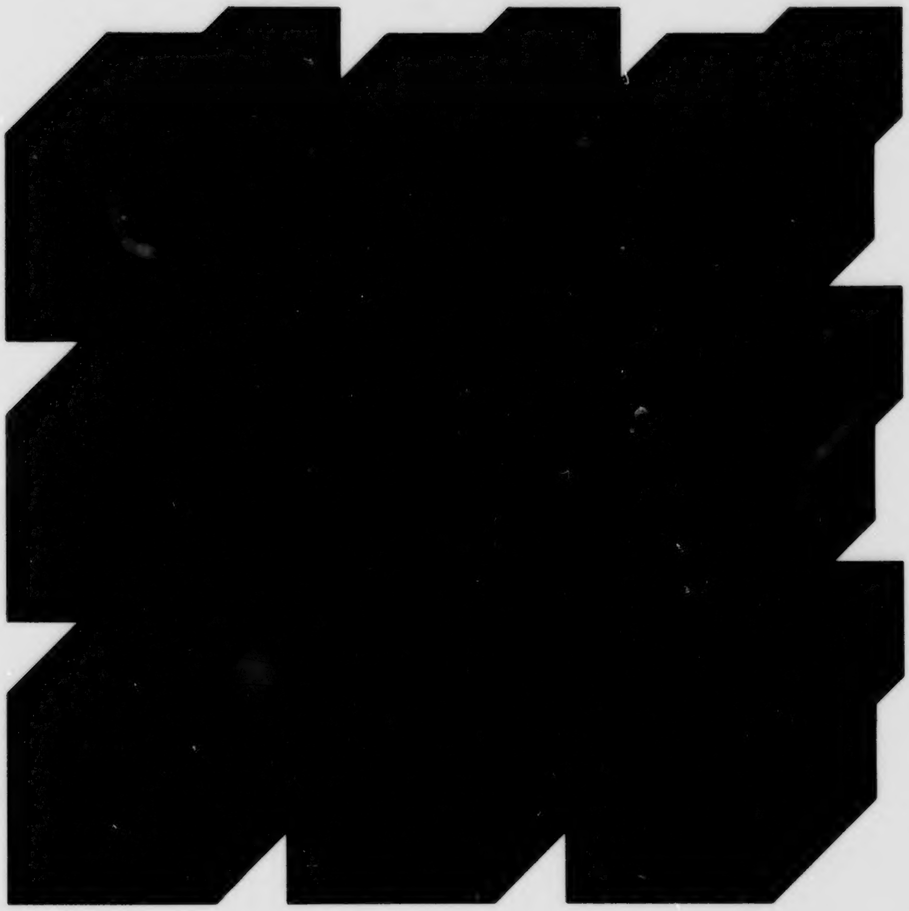

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DISCUSSION PAPER NO. 358

Adjusting to Trade: A Comparative Perspective

by

M. J. Trebilcock, M. Chandler,
and R. Howse, with the
collaboration of P. Simm

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RESUME

Nous examinons, dans la présente étude, les mesures d'adaptation prises par certains pays industrialisés (notamment le Canada, les États-Unis, la France, l'Allemagne de l'Ouest, le Japon, la Suède et l'Australie), au cours des deux dernières décennies, pour faire face à la concurrence des importations dans certains secteurs tels que l'acier, le charbon, l'automobile, la construction de navires, le textile, le vêtement et la chaussure.

Nous commençons, au chapitre I, par délimiter divers cadres normatifs (efficience économique, utilitarisme, théorie du contrat social, théorie du bien-être collectif) qui semblent jouir d'un appui solide dans de nombreux milieux, et nous évaluons, au regard de ces cadres, les propriétés centrales de certaines stratégies d'adaptation (principalement les restrictions du commerce, les subventions aux industries et les politiques de main-d'oeuvre). Nous soutenons qu'en général, les politiques qui retardent l'adaptation affichent rarement des propriétés favorables dans l'une ou l'autre de ces perspectives normatives, et que les politiques de main-d'oeuvre qui allègent pour les travailleurs le fardeau de l'adaptation affichent les propriétés normatives les plus souhaitables.

Au chapitre II, nous examinons, dans un cadre comparatif, les données empiriques sur les coûts et les avantages des restrictions du commerce imposées en réaction aux exigences d'adaptation. Dans presque tous les cas, les coûts par emploi protégé pour les consommateurs à l'intérieur des pays protectionnistes dépassent de beaucoup la valeur de ces emplois. Même du point de vue des théories du contrat social (de la justice distributive) et du bien-être collectif, les résultats voulus pourraient être atteints à bien meilleur compte par d'autres formes d'intervention.

Au chapitre III, nous analysons les données empiriques sur les coûts et les avantages des subventions industrielles dans certains pays et secteurs. Bien que des subventions à la sortie semblent avoir facilité le processus d'adaptation dans certains cas, les subventions pour le maintien ou la modernisation des emplois n'ont pas empêché la diminution massive de l'emploi dans presque tous les secteurs étudiés. Etant donné que les effets de désorganisation qu'exerce le changement sur les travailleurs, selon chacune des trois perspectives éthiques, sont à l'origine de la justification de l'intervention, il ressort -- de cette incapacité relative des subventions pour le maintien d'éviter de telles désorganisations -- qu'il y aurait lieu de réévaluer le choix de subventions pour le maintien plutôt que de subventions pour la sortie d'industries comme réaction au déclin industriel. Notons surtout que les principaux objectifs étiques des subventions pour la modernisation et la rationalisation sont peut-être faibles, car les gains de productivité provenant de la rationalisation sont en grande partie réalisés par des coupures de personnel.

Au chapitre IV, nous relevons les principaux genres d'instruments de politique et nous évoquons les grandes stratégies de main-d'oeuvre adoptées par les pays industrialisés.

L'évaluation des instruments d'adaptation de la main-d'oeuvre selon des critères éthiques, politiques et économiques révèle que les politiques qui n'ont pas pour effet de maximiser l'efficience économique ne sont pas nécessairement irrationnelles ou impropres. Vu que des valeurs non économiques peuvent donner lieu à des demandes d'aide socialement acceptables, le problème concernant l'adaptation de la main-d'oeuvre consiste à assurer qu'on n'utilise pas une définition moralement pluraliste des intérêts de la société pour légitimer la recherche de rentes et des choix de politiques qui sont contraires, en réalité, aux objectifs sociaux reconnus.

Au chapitre V, nous examinons les déterminants politiques des mesures d'adaptation en reliant leurs tendances aux particularités institutionnelles du système politique. Il ressort de cette analyse que la voie la plus prometteuse vers une adaptation économique plus poussée ne consiste pas à emprunter des institutions d'autres systèmes, ni à produire des résultats particuliers, mais plutôt à recourir à des procédés visant à améliorer l'information et à encourager ceux que désavantagent les politiques qui retardent l'adaptation à participer au processus décisionnel.

Nous terminons notre étude, au chapitre VI, en démontrant que la théorie trompeuse que nous a léguée le mercantilisme influe encore considérablement sur la manière dont les gens perçoivent les gains, en ce qui touche les importations, résultant d'une libéralisation des échanges. Ces conceptions trompeuses peuvent être exploitées en faveur de producteurs locaux menacés par la concurrence des importations, par des procédés encourageant des politiques qui retardent l'adaptation, principalement les restrictions du commerce, les subventions industrielles et les politiques de main-d'oeuvre axées sur le maintien des emplois. Même si l'on reconnaît la validité normative de perspectives non économiques telles que les théories du contrat social (de justice distributive) et du bien-être collectif, bon nombre des principales réactions aux pressions de la concurrence demeurent injustifiables. Dans la plupart des cas, ces valeurs non économiques peuvent être maintenues à des coûts sensiblement moindres par d'autres instruments de politique.

Nous tentons ensuite d'identifier la source de dysfonctionnement du processus décisionnel qui engendre ces déviations. Nous soutenons que l'élimination de l'influence des fausses conceptions mercantilistes doit commencer par le rétablissement d'un consensus national sur les avantages nationaux d'une libéralisation des échanges plutôt que par le rétablissement, en l'absence d'un tel consensus national, de normes et de procédés internationaux. Le défi pour les décisionnaires est de savoir si un régime partial acceptera des réformes visant à éliminer tout parti pris dans les institutions et les mécanismes locaux qui formulent et administrent la politique commerciale.

En nous fondant sur la distinction relevée par Buchanan entre le processus décisionnel "constitutionnel" et les décisions législatives et administratives prises au jour le jour, nous trouvons un motif d'optimisme prudent quant à la viabilité politique d'organismes démocratiques nationaux et internationaux "de transparence". Un organisme national pourrait se voir confier la tâche de calculer les coûts et les avantages des politiques d'adaptation existantes au regard de ceux des cadres normatifs pluralistes mentionnés, et les coûts et avantages d'autres politiques intérieures possibles. Un organisme international de transparence pourrait être chargé d'assurer la fidélité des organismes nationaux de transparence à des normes de procédure internationales reconnues dans leurs méthodes d'évaluation, et de calculer les coûts et avantages que représentent pour les pays étrangers et l'économie mondiale dans son ensemble les diverses politiques nationales qui faussent les échanges.

ABSTRACT

This study examines how a number of industrialized countries - namely, Canada, the United States, Britain, France, West Germany, Japan, Sweden, and Australia - have, over the past two decades or so, grappled with adjustment pressures induced by competitive inroads made by foreign imports in a number of sectors (steel, coal, automobiles, shipbuilding, textiles, clothing, and footwear) that have been under stress in many of those countries.

The study commences, in Chapter 1, with the development of several normative frameworks (economic efficiency, utilitarianism, social contractarianism, communitarianism) that appear to enjoy widespread support in many communities, and it evaluates the central properties of various instrumental responses to adjustment pressures (primarily trade restrictions, industrial subsidies, and labour market policies) against those frameworks. We argue that, in general, adjustment-retarding policies rarely exhibit favourable properties in any of these normative perspectives and that labour market policies that ease the burden of adjustment for workers exhibit the most desirable normative properties.

In Chapter II, we examine, in a comparative framework, the empirical evidence on the domestic costs and benefits of trade restrictions as a response to adjustment pressures. In almost every case, the costs to domestic consumers, per job saved, vastly outweigh the value of the jobs saved. Even in the social contractarian (distributive justice) and communitarian frameworks, the values implicated would seem capable of vindication at much lower cost through alternative policy instruments.

In Chapter III, we consider the empirical evidence on the costs and benefits of industrial subsidies in selected countries and sectors. Although exit-oriented subsidies appear to have eased the adjustment process in some instances, subsidies for employment maintenance or modernization have not prevented massive employment declines in almost all of the sectors under study. Since from all three ethical perspectives the dislocation effects of change on workers is at the root of the justification for intervention, the relative incapacity of stay-oriented subsidies to prevent such dislocations suggests a rethinking of the choice for stay- rather than exit-oriented industrial subsidies as a response to industrial decline. In particular, subsidies for modernization and rationalization may be weak in terms of their main ethical goals, as the evidence suggests that the productivity gains from rationalization are largely realized through labour-shedding.

In Chapter IV, we survey the major types of labour-market-policy instruments and profile the principal labour market strategies followed in the advanced industrialized nations. Assessing the

instruments of labour adjustment according to ethical and political, as well as economic, criteria reveals that those policies which fail to maximize economic efficiency are not necessarily irrational or inappropriate. Assuming that non-economic values give rise to socially accepted claims for assistance, the problem in dealing with labour adjustment is to ensure that a morally pluralistic definition of society's interests is not used to legitimize rent-seeking and policy choices that are in fact contrary to widely shared social objectives.

In Chapter V, we focus on the political determinants of adjustment policy, linking patterns of policy to institutional attributes of the political system. The analysis suggests that the most promising route to greater economic adjustment does not seek to borrow the institutions of other systems nor does it seek to produce specific policy outcomes; instead, it focuses on process characteristics that will enhance the information and political participation of the potential losers from adjustment-retarding policies.

In Chapter VI, we conclude the study by arguing that the enduring conceptual fallacies bequeathed by mercantilism contrive to shape significantly domestic perceptions of the gains from trade liberalizaton with respect to imports. These fallacies are able to be exploited by domestic producer interests, threatened by import competition, in domestic political processes in promoting adjustment-retarding policies, principally trade restrictions, industrial subsidies, and stay-oriented labour market policies. Even recognizing the normative validity of non-economic perspectives such as social contractarian theories of distributive justice and communitarianism, it is impossible to justify many prevailing policy responses to adjustment pressures. In most cases, these non-economic values could be vindicated at vastly lower costs by alternative policy instruments.

We then attempt to identify the source of dysfunctions in domestic policy-making processes that generate these policy biases. We argue that eliminating the influence of mercantilist fallacies must begin with a reshaping of a domestic consensus of the domestic advantages of trade liberalization rather than through a reshaping of international trade norms and procedures, in the absence of such a domestic consensus. The challenge for policy-makers is whether a biased domestic policy is likely to accept reforms to the domestic institutions and processes that formulate and administer trade policy, with a view to removing these biases.

Building on the distinction drawn by Buchanan between "constitutional" policy-making and day-to-day legislative and administrative politics, we see reason for cautious optimism as to the political viability of highly public and participatory domestic and international "transparency" agencies. A domestic agency might be charged with the task of evaluating the domestic costs and benefits of existing adjustment-related policies against the pluralistic normative frameworks noted above and the costs and benefits of alternative domestic policies. An international transparency agency might be charged with the tasks of ensuring the fidelity of domestic transparency agencies to accepted international procedural norms in their evaluation procedures and of estimating the costs and benefits to foreign countries and to the global economy at large of various trade-distorting domestic policies.

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FOREWORD

Governments in many of the world's richer economies have assisted industries in difficulty because of foreign competition. Canada is no exception to this, as a number of recent Council discussion papers on textiles, clothing, footwear, shipbuilding as well as pulp and paper have demonstrated.

In this discussion paper the authors adopt a different approach. They ask what lessons can be learnt from the foreign experience such that Canadian adjustment policy toward trade-sensitive industries is improved. The study confines itself to: the major policy instruments used to assist such industries including quantitative and other restrictions on imports, industrial subsidies and labour market policies; several trade-sensitive industries, including textiles, clothing, footwear, steel, automobiles and shipbuilding; and the experience of adjustment in selected countries that are members of the Organization of Economic Co-operation and Development.

One of the major lessons to come from the analysis is the importance of creating institutions or bodies that regularly report on the benefits costs and impacts of government intervention in trade-sensitive industries. If such a task were undertaken by many countries it might form a first step in, eventually, leading to commonly accepted ways of valuing such government intervention. As such, it could form a useful benchmark against which discussions could take place under GATT, with a view to eventually eliminating such intervention, in a similar way that tariffs have been reduced.

Professor Trebilcock is currently Director of the Law and Economics Program, Faculty of Law, Professor Chandler, is the Chairperson, Department of Political Science, while Robert Howse is a senior law student, all at the University of Toronto. Professors Trebilcock and Chandler have written extensively on adjustment, choice of governing instruments, and trade policy.

This discussion paper was undertaken as part of the Council's research program on Manufacturing Firm Adjustment.

Judith Maxwell
Chairman

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1 A CONCEPTUAL FRAMEWORK FOR EVALUATING ALTERNATIVE TRADE-RELATED ADJUSTMENT POLICIES

I. INTRODUCTION

(a) Purpose and Structure of Study

In all industrial societies, communities, firms and individuals are continuously confronted with myriad sources of shocks and adjustment pressures. Governments in turn confront continuous demands from affected interests to intervene to cushion these shocks and mitigate these adjustment pressures. The central concern of this study is with one class of shock: trade-induced economic and social dislocations. The question the study addresses is whether these dislocations warrant special government adjustment policies designed to cushion the impact and/or velocity of these changes.

In this chapter, we attempt to provide a sketch of the general empirical magnitude of trade-induced dislocations relative to the many other kinds of dislocations that modern countries confront. We then describe three policy perspectives - economic, ethical and political - from which the case for government intervention to mitigate these dislocations can be evaluated. We then describe the major classes of policy instruments available to a government contemplating intervention: trade restrictions, industrial subsidies, structural policy responses, labour adjustment policies, and macroeconomic policies. In each case, we evaluate the central characteristics of each policy instrument against the three policy perspectives described and identify convergences and divergences between these perspectives.

We seek to argue that in import-impacted sectors, government policy instruments that facilitate the exit of displaced labour by underwriting exit costs are usually most congruent with the normative economic and liberal individualist ethical perspectives, but that the positive political perspectives may often lead to an inversion of the policy priorities suggested by these two normative perspectives. We also consider the case for intervention from a communitarian ethical perspective, and argue that there may in some cases be a limited justification for job-preserving or creating policies to preserve community continuity and identity. We seek to argue further that the economic and ethical justifications for intervention are not limited to dislocations caused by changes in trade patterns or trade policies but have broader applications to job displacement from a variety of causes.

In the light of the conceptual framework laid out in chapter I, we proceed in chapters II, III, and IV, to review comparative empirical experience in trade-impacted sectors with three major classes of policy instruments - trade restrictions, industrial subsidies, and labour market policies. We draw principally on experience in Canada, the U.S., Britain, West Germany, France, Sweden, Japan and Australia and focus on certain sectors which have experienced major competitive inroads from foreign imports in many of these countries. These sectors are textiles, clothing, footwear, steel, coalmining, shipbuilding and automobile manufacture. We conclude that the comparative empirical experience tends to confirm our thesis in chapter I on the relative efficacy of alternative instruments of intervention as evaluated against economic, ethical and political perspectives.

In chapter V, again in a comparative framework, we examine differences in political institutions in the countries whose adjustment experience is under review to attempt to identify differences in institutional characteristics that might plausibly be viewed as at least in part explaining differences in the choice of policy instruments for responding to adjustment pressures in the face of trade impacts. While there are many differences in political institutions in the countries whose experience we review, we conclude that the evidence does not yield robust hypotheses as to which institutional differences most significantly influence policy choices. However, we also conclude that domestic institutional structures of various kinds that facilitate the revelation of the costs of adjustment-retarding policies and that facilitate the articulation of consumer interests in favour of liberal trading regimes appear to be of some significance.

In chapter VI, the study concludes with a review of possible reforms to current domestic and international policies and policy-making processes in the trade context. We conclude that there seems little prospect of international agreements on major new substantive constraints on national policy-making, and that a more productive line of inquiry would attempt to address dysfunctions in domestic policy-making institutions and processes that systematically discount the enhancements in domestic consumer welfare typically associated with a more liberal international trading regime. Changes in institutional features of domestic trade policy-making processes that would enhance the transparency of the costs of adjustment-retarding policies and facilitate consumer participation in these processes are sketched. The vesting of an "audit" function in an international agency, such as the GATT Secretariat, to monitor adherence to these domestic procedural norms may usefully complement proposed changes to national policy-making processes. These domestic and international institutional reforms, we argue, would make adjustment-retarding policies politically relatively less attractive and adjustment-promoting policies, especially policies designed to assist displaced labour, relatively more attractive, thus producing a greater congruence between the economic, ethical and political policy perspectives outlined at the outset of our study.

(b) The Process of Creative Destruction

In current preoccupations with the prospects and implications of bilateral Canada - U.S. trade liberalization and perhaps further concurrent multilateral trade liberalization, it is easy to lose a sense of perspective on how traumatic the impacts of adjustment required by further trade liberalization are likely to be compared to the many other adjustment processes that communities, firms and individuals are already undergoing.

First, it is worth observing that Canada has cut its tariffs on dutiable imports from an average rate of 24.3% in 1938 (Department of Trade and Commerce, 1938;p.3) to an average level of 9 - 10% today (Whalley, 1985;p.21). These reductions were accomplished over seven multilateral negotiating rounds held within the framework of the GATT and were matched by a roughly similar or larger scale of tariff reductions by other industrialized nations. From 1947 to 1986, per capita GNP in Canada rose in real terms from $7,402 to $19,925 (1986 $) (an increase of 196.2%); and civilian employment rose from 4,821,000 in 1947 to 12,295,000 in April 1988 (an increase of 155%).

Thus, the dramatic reductions in average tariff protection of Canadian industry over the last four decades have not prevented equally dramatic increases in average real incomes and the size of the labour force. Over the past four decades, trade-induced dislocations from tariff reductions in most sectors of the economy have been relatively modest, although some especially import-sensitive sub-sectors, like textiles and clothing, remain heavily protected and some sectors, like manufacturing, have suffered significant, relative employment declines.

The scale of potential trade-induced dislocations, particularly if reductions in tariffs and related forms of protection are phased in over many years (as was the case with the Kennedy and Tokyo Round tariff cuts and is also envisaged in current bilateral negotiations), should be compared to some of the more common adjustment stresses and exigencies of life that are operative without any further changes in trade policy.

To quote some suggestive figures, in 1985-86, there were 8,631 business bankruptcies and proposals under the Federal Bankruptcy Act and 1,955 liquidations under the Canadian Business Corporations Act. From April 1, 1982 to March 31, 1983, an estimated 3,704 business insolvencies occurred under Ontario law. In 1985-86, there were 15,137 new incorporations under the Canadian Business Corporations Act, and in 1984-85, 32,000 new incorporations under the Ontario Business Corporations Act (Department of Consumer and Corporate Affairs, 1986; Ontario Ministry of Consumer and Commercial Relations, 1985; Ontario Ministry of Labour, 1985).

Green (1984) notes that of the firms and plants that accounted for almost all Canada's employment in and output from manufacturing and mining in 1970, about one quarter had disappeared by 1976. However, an approximately equal number were born during the same period, so that the net loss was less than three percent. The following table depicts this dynamic in greater detail:

TABLE 1

Openings and closings in manufacturing and mining. 1970-6

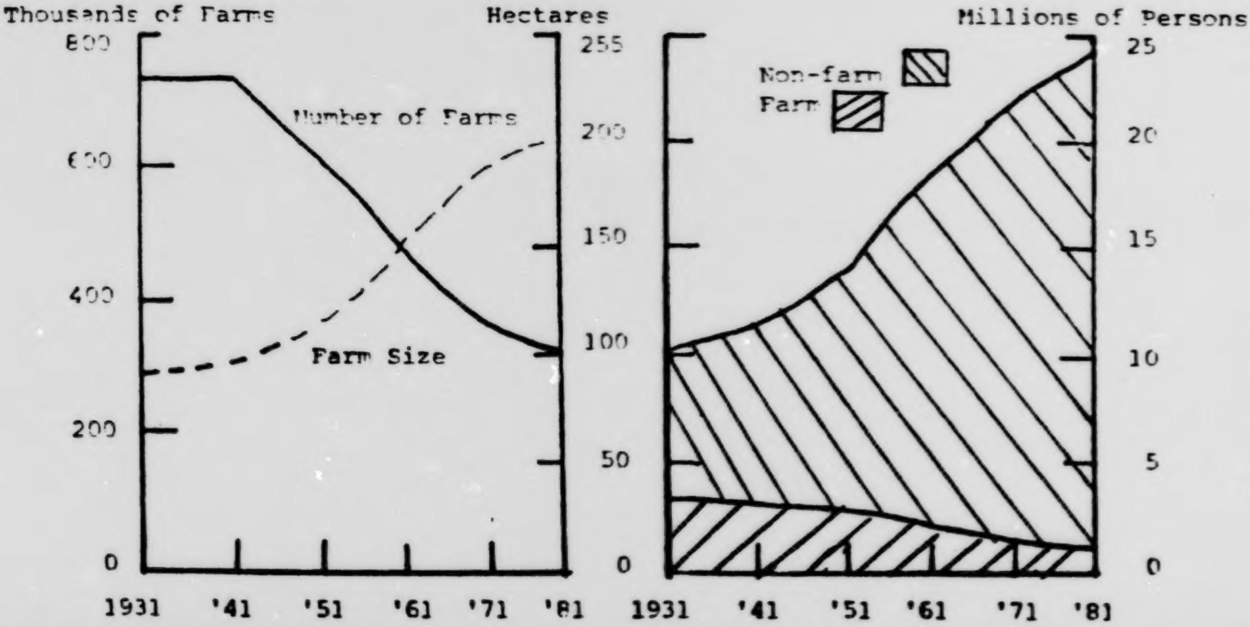
	Firms	Plants	% of Total Outputs	Employment (000s)
All Canada				
Total in existence, 1970	17,079	21,798		1,914.0
Openings	4,211	4,641	9.3	162.8
Closings	4,657	5,230	7.9	169.3
Net Change, 1970-6	-446	-589		-6.5
Ontario				
Total, 1970	6,857	8,673		-
Openings	1,558	1,678	6.6	-
Closings	1,675	1,874	6.5	-
Net Change, 1970-6	-117	-196		-
Quebec				
Total in existence, 1970	6,758	7,616		-
Openings	1,539	1,610	10.2	-
Closings	1,929	2,019	9.3	-
Net change, 1970-6	-390	-409		-

Source: Green, 1984.

On an individual level, in 1981, there were 371,346 births, 171,029 deaths, 190,082 marriages, and 67,671 divorces (a doubling in the divorce rate per capita from 1971). The crude birth rate (per 1,000 total population) has fallen from 28.9 in 1947 to 15.3 in 1981. In 1982, there were 30,643 consumer bankruptcies reported. In 1981, 128,618 immigrants arrived in Canada from many countries of origin and in 1981-82 an estimated 41,750 emigrants left Canada. Just under 16% (3.8 million) of Canadian residents were originally immigrants, as of the 1981 Census. The 1981 Census showed almost half (47.6%) of Canada's population five years and over in 1981 living in a different dwelling than five years earlier; 24.9% had moved within the same municipality and 22.7% had moved from one municipality to another. The last group consisted of 15.1% who moved within the same province, 5.1% from one province to another, and 2.5% from outside Canada (Statistics Canada, 1985). Between 1972 and 1984, an average of 380,000 persons a year changed residences by moving across provincial boundaries (about 15 for every thousand Canadians) (Macdonald Royal Commission, 1985; vol.III, p.124).

Today, three or four Canadian families out of a hundred is a farming family. In 1885, when the first Canadian transcontinental rail line was completed, 60 families out of every 100 were farm families. In 1941, there were 733,000 farms in Canada, in 1981 the number of farms was 318,000, yet the volume of agricultural production was about 175% greater in 1981 than in 1941. Trends in farm size and population 1931-82 are shown below (Statistics Canada, 1985; pp.291,294):

Chart 1
Trends in farm size and population, 1931-81



Changes in the percentage of the labour force employed in major sectors from 1946 - 1982 are shown below (Harris, 1985):

Table 4 Employment by Sector, 1946-82

Industry	1946	1966	1982
		(percent)	
Goods:			
Agriculture	24.8	7.6	4.4
Fishing, trapping and forestry	2.3	1.4	2.5
Mines, quarries and oil wells	1.5	1.7	-
Manufacturing	25.3	24.4	18.2
Construction	4.7	7.0	5.6
	58.6	42.1	30.7
Services:			
Transportation, storage and communication	7.2	7.6	8.2
Trade	12.0	16.5	17.4
Finance, insurance and real estate	2.6	4.2	5.7
Community, business and personal services	19.6	23.9	30.8
Public administration	n.a	5.7	7.2
	41.4	57.9	69.3
	100.0	100.0	100.0

The slowest and fastest growing industries in terms of employment, 1951-1981, are shown below (Picot, 1986; p.21):

Table 5

Slowest and Fastest Growing Industries, 1951-61, 1961-71 and 1971-81

1951-61	% Change	1961-71	% Change	1971-81	% Change
Ten Slowest Growing or Declining Industries (Experienced Labour Force)					
Fishing and Trapping	-31.3	Fishing and Trapping	-26.8	Tobacco Products	-9.6
Primary Metal Industries	-28.7	Forestry	-25.8	Agriculture	-1.6
Agriculture	-22.6	Agriculture	-21.5	Personal Services	-0.4
Textile Industries	-22.5	Leather Industries	-8.6	Leather Industries	8.2
Knitting Mills	-16.4	Personal Services	-4.4	Electrical Products	11.6
Forestry	-15.4	Knitting Mills	-1.0	Federal Administration	13.5
Wood Industries	-12.9	Religious Organizations	4.5	Textile Industries	13.5
Transportation Equipment	-6.6	Tobacco Products	6.4	Paper and Allied Industries	14.1
Clothing Industries	4.6	Wood Industries	8.4	Primary Metal Industries	14.3
Tobacco Products	5.2	Transportation and Storage	12.3	Knitting Mills	14.8
Ten Fastest Growing Industries (Experienced Labour Force)					
Local Administration	119.3	Provincial Administration	139.7	Services to Business Management and Misc. Serv.	105.7
Services to Business Management and Misc. Serv.	98.5	Education and Related	119.4	Accommodation and Food Services	82.2
Provincial Administration	87.1	Services to Business Management and Misc. Serv.	112.0	Amusement and Recreation	67.2
Health and Welfare Services	79.1	Amusement and Recreation	101.3	Insurance and Real Estate	66.1
Education and Related	78.3	Rubber and Plastic Products	89.4	Financial Institutions	63.7
Financial Institutions	62.6	Health and Welfare Services	76.7	Local Administration	58.9
Insurance and Real Estate	58.5	Financial Institutions	74.6	Provincial Administration	56.3
Federal Administration	57.4	Machinery Industries	63.5	Health and Welfare Services	56.2
Accommodation and Food Services	55.2	Insurance and Real Estate	54.6	Wholesale Trade	51.7
Amusement and Recreation	42.9	Accommodation and Food Services	52.5	Machinery Industries	49.4

Source: Table B2.

The sharp drop in agricultural employment, the relative decline in manufacturing employment, and the sharp increase in employment in the services sector imply major inter-sectoral shifts in employment over time that set in context estimates of likely inter-sectoral shifts in employment from future trade liberalization.

Between 1974 and 1982, an average of some 33 per cent of employed workers in Canadian manufacturing industries separated from their employers each year. While a large percentage of total separations consist of rehires following temporary lay-offs, and therefore do not result in a reallocation of labour, permanent lay-offs and voluntary attritions (quits and other) still amount to over 20 per cent of manufacturing employment annually (Managing Adjustments, 1988, p. 10; Economic Council of Canada, 1988).

Citation of this sampling of statistics is motivated by a simple objective: to convey a sense of constant and often relatively dramatic transitions and adjustments that occur continuously in a modern industrialized economy. Joseph Schumpeter once wrote that a market economy involves "a perennial gale of creative destruction" (Schumpeter, 1975; p.87). Even in contemporary centrally planned economies, with their greater rigidities, many similar processes of economic and social change are at work, as the examples of present-day China and the Soviet Union dramatically exemplify.

(c) The Spreading of Risk

The central policy issue that confronts governments, specifically in mixed market economies and liberal democracies such as Canada's, is the appropriate extent of collective responsibility for the consequences of destructive features of these dynamic processes of change, however much these may be outweighed in the aggregate and in the longer term by their creative potential. Governments in many developed economies have assumed an increasingly major role in underwriting the negative contingencies of life. Furthermore, in federal states, such as Canada, governments have also committed themselves to maintaining economic opportunity and viable communities in all regions, despite changes in comparative advantage which would, assuming perfect mobility, lead to substantial shifts of labour and capital from already disadvantaged to relatively advantaged regions.

In Canada, for example, federal equalization payments, which amounted to $5.5b in 1985, transfer resources from "have" to "have not" provinces. Federal regional development programs, entailing expenditures of $388m in 1985, transfer further resources to disadvantaged regions (Statistics Canada, 1984; pp.22,23). Federal transfer payments to the provinces to further regional development have risen from 0.13% of GDP in 1947 to 4.04% in 1986.

At the level of the firm, federal government transfer payments (subsidies, capital assistance) in 1986 amounted to $7.3b. Provincial government transfers to business in 1986 amounted to $6b. Municipal transfers to business in 1986 amounted to $600m. Foregone federal corporate tax revenues from tax expenditures were estimated in 1982 at $11.5b (Statistics Canada, 1987; pp.24,25).

At the level of the individual, with respect to social security programs, social security expenditures by all levels of government (excluding health care expenditures and unemployment benefits) in 1985 amounted to over $37 billion (ranging over a wide variety of social security programmes including the Canada and Quebec Pension Plans, Old Age Benefits, Family Allowances, the Child Tax Credit, Workers Compensation Plans, the Canada Assistance Plan (welfare benefits), and War Veterans Allowances) (Canada Year Book, 1988, Statistics Canada, p.6-3).

With respect to unemployment benefits, the federal government paid out $10.2 billion in 1985 to approximately 3.3 million people (Canada Year Book, 1988, p.5-14). In 1984-85, an additional $1 billion was spent on institutional and industrial training and relocation programs (Wonnacott, 1987, p. 98).

Public expenditures in Canada on education have risen from $147 per capital in 1947 to $1,237 per capita in 1983-84 in real terms (1986 $), or from 1.99% of GDP to 6.79% (Canada Year Book, 1988, p.4-1; Statistics Canada, 1985; pp. 124,129). Public expenditures on health care have risen from $54 per capita in 1947 to $1,201 per capita in 1985 in real terms (1986 $), or from 0.72% of GDP to 6.18% (Canada Year Book, 1988, p.3-36). In addition, in 1981 provincial workers' compensation programs paid $1.6 billion in benefits to 1.2 million injured workers and their dependents or survivors (Ibid; p.189).

Apart from these government programs in education, health, unemployment insurance, and social security, individuals, of course, often provide themselves with substantial security against various of the contingencies of life through pensions, insurance, savings, assets, and access to credit.

With this mix of public and private policies, programs and resources that provide various forms of security against some of the negative contingencies of life, the question must now be addressed of whether trade-induced dislocations to communities, firms and individuals call for special policy responses not adequately accommodated in more broadly-cast security nets. Obviously, many existing policies - macroeconomic stabilization policies, equalization and regional development policies, industrial subsidy policies, unemployment insurance, education policies, and manpower training and relocation policies - are likely to be of direct relevance to sectors of the economy under import pressure. What further or alternative policy responses are required?

A concern with adjustment costs caused by either changes in trading patterns or in trade policies has long antecedents. The General Agreement on Tariffs and Trade (GATT), from its inception in 1947, provided for escape clause or safeguard relief (Article XIX) through the temporary reinstatement of previous tariff concessions if foreign imports are causing severe disruption to a domestic industry. This provision itself was borrowed from similar provisions in previous bilateral trade treaties. The Treaty of Paris that in 1951 established the European Coal and Steel Community to promote the integration of coal and steel production in Western Europe contemplated various forms of "orderly" adjustment in the furtherance of this goal. The Treaty of Rome, which in 1957 established the European Economic Community, provided for a European Social Fund to provide assistance to workers to facilitate adjustment to liberalized European trade. In the U.S., the Trade Expansion Act of 1962 provided for assistance to firms and workers to ease adjustments to the Kennedy Round tariff concessions. In Canada, the Canadian-American Automotive Agreement of 1965 (the Auto Pact) provided for forms of adjustment assistance to firms and workers affected by the Agreement. The General Adjustment Assistance Programme (GAAP) adopted by Canada in 1968 provided adjustment assistance to firms under import pressure as a result of Kennedy Round tariff cuts (Banks & Tumlir, 1986; chap.2).

These and other early examples of programs designed to ease the adjustment costs of trade imports were generally not widely utilized, in part because of the high growth rates that characterized most industrialized economies throughout the 1950's and 1960's.

However, interest in adjustment assistance policies sharply intensified in the 1970's for a number of reasons: the two oil price shocks and accompanying recessions; the rise of Japan and other N.I.C.'s as major international trading threats; and further trade liberalization as envisaged by the Tokyo Round tariff reductions and codes restricting the use of various non-tariff barriers to trade (N.T.B.'s). In an environment of economic stagnation and increased import competition, many governments in western industrialized countries sought strategies that would in various degrees restore international competitiveness in established industries through rationalization or modernization, achieve international competitiveness in new "growth" industries, and ease exit costs for capital and labour in industries whose comparative advantage was perceived as permanently lost. These concerns have persisted into the 1980's, with the deep, world-wide recession of the early 1980's and with the prospect of substantial bilateral trade liberalization between Canada and the U.S. and perhaps further multilateral trade liberalization in the current Uruguay Round of GATT negotiations.

(d) The Nature of Trade-Related Adjustment Costs

In evaluating the gains from trade liberalization, an analysis that employs comparative statics is likely to overstate the gains: we are currently in state A, where national income is X; we could move to state B, where national income will be X + Y. Richardson argues that this analysis overlooks two kinds of social costs that any dynamic analysis must take account of in evaluating the relative costs and benefits of states A and B: dislocation costs and adjustment costs incurred in moving from state A to state B (Richardson, 1980; chap. 10). Dislocation costs entail output of goods or services sacrificed from any unemployment, temporary or otherwise, of labour and other resources caused by trade liberalization. Given common wage and input price rigidities, at least in the short-run, markets will not clear instantaneously in response to changes in the terms of trade, and resources are likely to be rendered idle. Adjustment costs entail resources sacrificed to retrain labour, retool machines, refurbish factories, redevelop land and relocate factors of production that trade liberalization causes to be redeployed intra-sectorally or to be shifted intersectorally. Richardson argues that dislocation and adjustment costs "can be fatal to the economic welfare case for trade liberalization. They can provide an economic justification for a nation's retention of its barriers to international trade, even when free trade would be better for it in the long-run. The long-run benefits are not worth the short-run costs" (Richardson, 1980; p.321).

Banks and Tumlir dispute this conceptualization of the social costs of trade liberalization (Banks and Tumlir, 1986; chap. 3). Defining costs in opportunity cost terms, they argue that unless some available alternative opportunity is foregone, idle resources entail no social costs. Only if cost-effective policies can be invoked (but are not) to expedite the redeployment of resources to higher valued uses can one say that social costs have been incurred by the displacement of domestic resources by imports. It is true that such displacement will generate various kinds of private costs: with respect to firms, the write-down in the value of industry-specific assets; with respect to workers, the loss of job-specific human capital that may entail lower wages in alternative employment opportunities; loss of seniority, job security and pension rights; loss of resale value on homes in communities dependent on import-sensitive industries; psychic losses from leaving established social and cultural networks; with respect to communities, loss of tax base with industrial contraction and losses to other businesses and their employees that are dependent on the trade-impacted industry (Green, 1984). Banks and Tumlir argue that these costs simply entail transfers from losers to gainers from trade liberalization, thus entailing only distributive implications but not resource costs (in an opportunity cost sense). Moreover, by assumption, the losses to the losers must be less than the gains to the gainers from trade liberalization, otherwise the losers would have been able to "bribe" the gainers to forego the benefits of trade liberalization.

Even if this argument is correct from an economic perspective, the undeniable private dislocation and adjustment costs (henceforth for the sake of compendiousness, simply adjustment costs) entailed in trade liberalization retain considerable ethical and political significance, and it remains important at this juncture to develop a general sense of their empirical order of magnitude. The relative costs and benefits of preserving trade restrictions are reviewed in more detail in Chapter II.

(e) The General Magnitude of Trade-Related Adjustment Costs

Harris in his analysis of the costs and benefits for Canada of complete multilateral free trade (MFT) (Harris, 1985) (which no one realistically envisages) estimates the gain in Canadian real income from free trade from the initial 1976 (pre Tokyo-Round) levels of protection would be of the order of 8% - 10% of GNP. The Canadian real wage would rise on the order of 20% - 25%, with gains in labour productivity of similar magnitudes. The pattern of adjustment to MFT primarily would be through intra-industry rationalization with improved cost efficiency in most manufacturing industries achieved through the advantages of larger scale and greater specialization. Under MFT, only the most labour-intensive sunset industries would lose. On an aggregate basis, approximately 6% of the labour force would be required to shift inter-sectorally. Under MFT, employment actually would increase in the manufacturing sector, and the sector as a whole would move into a trade surplus position. The industrial base of the economy would expand significantly under free trade.

While Harris' estimates of future gains from MFT have been criticized as too optimistic, in part because they fail to take account of the effects of the Tokyo Round tariff reductions now in place (Whalley, 1984), it would seem to be the case, for similar reasons, that they are also likely to over-estimate future adjustment costs.

The size of Harris' estimated inter-sectoral shifts of labour should be compared to those experienced out of agriculture in Canada over the past 50 years and more recently the relative growth of the services sector and relative decline of the manufacturing sector in terms of employment.

Lipsey and Smith examine the process of adjustment in the twenty major Canadian manufacturing industries from 1966 to 1981 when the substantial Kennedy Round tariff reductions were phased in and the Tokyo Round tariff reductions were beginning to take effect (Lipsey and Smith, 1985). Every manufacturing sector, with the single exception of knitting mills, increased the proportion of its total production that was exported. Overall, Canadian manufacturing firms exported 24% of their total production in the 1966 - 73 period and 30% in 1981. At the same time, every sector, with the single exception of petroleum and coal products, experienced an increase in the proportion of the Canadian market supplied by imports. Overall, 25% of the sales in Canadian manufacturing markets were served by imports in the 1966-73 period and 32% in 1981 (Ibid.; pp.106-110). Lipsey and Smith note that "whole industries have not disappeared in either [sic] country. Instead, each industry has specialized in particular niches so that trade has increased in each direction, in each industry" (Ibid.; p.109). The authors also provide figures for each sector of net exports - exports minus imports - as a proportion of its total production. Comparing the 1966 - 73 period with 1981, half of the industries listed increased their ratio of net exports to domestic production while the other half reduced theirs. They note: "This is just what we would expect from the operation of comparative advantage. Some industries have expanded exports relative to imports while others have contracted" (Ibid.; p.109). They also note that this is consistent with the experience of the European Economic Community, where the Treaty of Rome in 1958 envisaged initial tariff cuts of 10% a year for five years, with provision for review, but dislocations proved so much less than had been feared that in 1960 the Community decided to increase tariff reductions to 20% per year and to eliminate all quotas by the end of 1961 (Ibid.;p.106). Various estimates of the size of short-run adjustment costs relative to the size of long-run welfare gains from substantial trade liberalization run from ratios of 1:25 to 1:80 (Wonnacott, 1987, Appendix B). It is often argued that dramatic and often unpredictable shifts in international exchange rates are likely to have more severe effects on a country's competitive position than a measured and predictable phase-out of tariffs (Ibid, p. 19).

II. ALTERNATIVE POLICY RESPONSES TO TRADE-RELATED ADJUSTMENT COSTS

At this point, we lay out the four major classes of prospective public policy responses - trade restrictions, industrial subsidies, structural policies, labour market policies - to the costs of adjustment to trade liberalization (along with a brief comment on the relevance of macroeconomic policy), and evaluate these responses, in a general way, from economic, ethical, and political perspectives. The first two perspectives are normative (prescriptive), the third is positive (descriptive). Trade restrictions, industrial subsidies, and labour market policies will be explored in much greater detail in the ensuing three chapters, which will examine the empirical experience in our chosen sectors and countries with the use of these instruments. Aspects of structurally-related policy responses will be integrated into the discussion of other instruments in later chapters and will not be independently discussed.

(a) TRADE RESTRICTIONS

(1) Economic, Ethical and Political Perspectives

From a neo-classical economic perspective, trade restrictions are seen as having little to commend them both theoretically and empirically. By restricting the available contract opportunity set, mutual gains from exchange and specialization are foregone. Losses sustained by domestic producers from international trade are viewed as mere pecuniary externalities (private losses), which by definition are less than pecuniary gains to domestic consumers, otherwise, as earlier noted, domestic producers would cut prices to domestic consumers to neutralize the advantages to the latter of foreign trade and avoid larger losses to themselves. Recent theorizing in the international trade literature (Krugman, 1986) suggests some possibilities for strategic use of trade protection policies to foster new industries and establish pre-emptive market beach-heads, but this literature is both speculative and controversial and seems of limited relevance to declining industries. Some aspects of strategic trade theory that are relevant to declining industries, however, do deserve some attention. One of these relates to the longstanding concept of the "optimal tariff". If a country is a sole, or principal, consumer of a particular product, then it may capture a net benefit by imposing a tariff which, in driving down demand for the product, reduces its price (Cline, 1986). How this works is evoked by Richardson who uses the example of an American tariff on Japanese textiles: "With a U.S. tariff, the U.S. demand for Japanese textiles is discouraged. Japanese textile producers are faced with reduced demand and a smaller market, and will compete harder for the limited U.S. business. They will lower their price and improve their product and service" (Richardson, 1980; p. 303). Where America is the only buyer of Japanese textiles, a significant decrease in American demand could result in a large drop in world price. In order to thwart the comparative advantage of the foreign exporter, a tariff must be at least equal to the difference between world and domestic price. Hence, if world price decreases by the full amount of the tariff then American consumers are as well of as before the tariff was imposed, and Americans are better off collectively, since they capture the tariff revenue, which in effect is "paid" by the foreign exporter through the lowering of his price in response to weakened demand. These conditions of monopsony are, of course, extremely rare. The literature does not contain empirical evidence about the actual use of such tariffs.

Secondly, it is argued that tariffs can be used strategically, either as retaliation against the trade policies of other nations or as a means of pre-empting foreign competition. The retaliatory argument is that by punishing other countries for their own protectionist policies by restrictions on their imports, it will eventually become possible to force an elimination of those protectionist policies. This is, of course, a high risk game. Trading nations cannot act purely strategically in their policy responses -- they are not rational agents like the players of the prisoner's dilemma, who are fully free to render rewards and punishments in reaction to the other player's behaviour. Rather, important domestic political and ethical constraints fashion the available set of responses. The retaliatory tariff may create, for example, its own powerful domestic constituency thus rendering its removal politically difficult or impossible, whatever the other state's response. Secondly, there is a high risk that the target state will retaliate in such a way as to disrupt the exports of highly politically sensitive sectors. Further counter-retaliation will do nothing in the short-run to counter the strong political demands of such sectors and it may become politically necessary, (although in purely strategic terms, unwise) to negotiate a compromise with the target state, in order to induce the removal of retaliatory restrictions against one's own highly politically sensitive sectors. This also indicates the danger of pre-emptive strategies for a particular sector (i.e., strategies premised upon levels of protection which are so high as to deter others from trying to respond through subsidies etc.): retaliation against sectors may lead to such politically devastating consequences as to induce capitulation of the would-be pre-emptor. And of course, the considerable cost to consumers of these retaliatory tariffs would have to be weighed against the highly uncertain future benefits.

An ethical perspective on trade policy has more elusive implications for policy, in part because there are many ethical paradigms. Three central ethical paradigms in contemporary western political theory are utilitarianism, Kantian contractarianism, and communitarianism. Utilitarianism in many ways provides the underpinnings for modern welfare economics and would tend to suggest similar implications to the economic perspective. One difference is that utilitarianism would be unlikely to distinguish between the social and private costs of adjustment - both are sources of individual disutility and should be weighed against the gains in utility to other members of the community from trade liberalization in arriving at a determination of whether average utility (not simply income) has been increased (Trebilcock, 1986; Trebilcock and Quinn, 1982). The private and psychic costs of change may be substantial (Green, 1984; Olson, 1985) and may significantly narrow the gap between the gains to consumers from trade liberalization and the benefits of trade protection as reflected only in incomes preserved.

A Kantian social contract perspective, at least in its modern Rawlsian version (Rawls, 1971), would take the view that behind the hypothetical veil of ignorance where the social contract is constructed and where our individual lots in life and endowments are not known, we would all agree that no collective policy should be pursued that does not improve the lot of the least advantaged. In other words, we would all agree to a form of social insurance against the risk of finding ourselves in this plight. However, Rawls accepts that not every transaction or policy in society must meet this standard, provided that the basic structural rules of society are compatible with it. Thus, while trade liberalization may sometimes impose disproportionate costs on some of the least advantaged groups in society, it seems reasonable to infer that Rawls would accept that instruments other than trade protection may more efficiently meet his distributive justice goal without sacrificing the increases in the welfare of others that trade liberalization may bring.

A major difficulty with both the utilitarian and social contract ethical perspectives, in the international trade context, is that it is not clear why (as is often assumed) national boundaries should be assigned any special ethical significance (Brown and Shue, 1981). If a global perspective is adopted, then utilitarianism would require that the disutility caused to individuals in foreign countries from domestic trade restrictions should be weighed in the utilitarian calculus. If one accepts the declining marginal utility of money and that interpersonal comparison of utilities is possible, one might argue that the disutility caused to low-income foreign workers from domestic trade restrictions should be assigned special weight (Singer, 1979). Similarly, a global social contract perspective would require that the lot of the least well-endowed globally should be given a special ethical pre-eminence. In both cases, a global perspective would seem to militate strongly against the maintenance of trade restrictions by industrialized countries against N.I.C.'s and L.D.C.'s, or at least that foreign aid of equivalent value to the latter of trading opportunities foregone would be ethically dictated (Shue, 1981). However, aid on this scale is likely to exceed the compensation required to meet all losses to domestic interests in industrialized countries from trade liberalization. Moreover, it is not clear what purposes might be specified for the aid if production of exports displacing domestic production in the importing country is foreclosed.

A third ethical perspective which has gained considerable attention in recent years is that of communitarianism. Communitarians see the autonomous individual self of Raulsian liberal theory as reflecting an impoverished conception of human life. According to this perspective, of which one of the most prominent proponents is Michael J. Sandel, it is "constitutive attachments" to particular communities, groups institutions which make human life rich and which are formative of true human identities (Sandel, 1982).

In a number of respects the communitarian perspective may suggest policies which diverge considerably from those driven by utilitarian or liberal individualist perspectives. First of all, while the latter are able to conceptualize the psychic costs of change as real costs, which may merit compensation, for the communitarian the "exit" option -- even when accompanied by such compensation may still seem unjustified, if exit involves severing the bonds to extended family, neighborhood, region, or workplace colleagues. Loss of a significant part of one's human identity may simply not be compensable through redistributive policies. Policies which enhance the stay option may be preferred, where they are able to keep intact the attachments which, according to the communitarian, make life worth living. Still, even here certain "stay" instruments would be preferred over others. For example, programs which create long-term jobs through subsidies would be preferable to trade restrictions. Trade restrictions, unlike labour subsidies, need not prevent firms from replacing labour with capital in the production process, and hence are an uncertain hedge against the kinds of employment dislocations which communitarians seek to prevent. The rents that firms capture from trade restrictions may well be invested abroad or in other regions of the country that are not in decline, rather than used to preserve or create employment opportunities in the affected area. Retraining policies which permit workers to find jobs in the same locality would be both attractive to communitarians and broadly consistent with the "exit' option in the strict sense of exit from the industry that is in decline.

Of course, not all of the humanly significant attachments will be preserved (the workplace will change and with it co-workers) but as Sandel himself admits, "each of us moves in an indefinite number of communities, some more inclusive than others, each making different claims on our allegiance" (Sandel, 1982: p.146). It would be hard even for a committed communitarian to argue that the government should intervene to prevent all changes in these multiple interwoven loyalties and ties.

Another communitarian perspective, which has figured in the Canada-U.S. free trade debate, emphasizes the dangers to national cultural identity presented by free trade and full international mobility of labour and capital. Distinctive ways of life and cultural values are threatened by the homogenizing effects of economic and technological imperialism. This point of view, which has its roots in the critique by Rousseau and the 19th century political romantic movement of classical political economy, and also in the Jeffersonian alternative to the commercial republic, has found its leading Canadian exponent in the philosopher George Grant (Grant, 1967).

One cannot help but find somewhat unrealistic the romanticized "closed community" conception of contemporary critics of liberalism. Traditional closed societies may have preserved distinctive customs and beliefs against external influences, but only at the cost of racial, religious, and ideological intolerance, and of significant limits on individual self-development. If we were really to avoid the consequences of contemporary cosmopolitanism, trade barriers would hardly be enough -- we would need strict censorship, exit visas, limits on ethnic diversity, and other measures aimed at maintaining the "closedness" of the community.

(2) Policy-Making in an Ethically Pluralistic Society

Within the mainstream of policy debate in liberal democratic societies, all three ethical perspectives have prominence and the legitmacy that comes from expressing the felt needs of a substantial number of voting citizens. This pluralism is also reinforced by the circumstance that each perspective taken to its extreme would self-destruct or lead to a result so intolerable to a large number of citizens as, in effect, to disenfranchise their needs. A pure aggregate efficiency perspective, with no concern for the distributive consequences of adjustment, would lead to the kind of gap between rich and poor which, as the overwhelming public support for a wide range of social welfare policies suggests, has become intolerable to a majority of citizens. By contrast, a society that totally neglected the social efficiency consequences of its decisions in favour of redistributive or communitarian goals would eventually find itself with a very small pie left to distribute, and with communities dying from stagnation rather than from too rapid change. Even Marxists today recognize the importance of efficiency in making social justice affordable (Markovic, 1982).

Similarly, complete exclusion of community concerns would also be a disenfranchisement of important needs. Economists and liberal individualists tend to view mobility between jobs and regions as enhancing human autonomy and choice. Yet one does not need to accept the more extreme claims of communitarianism to recognize that the rapidity of change, the abrupt manner in which it dissolves long-standing relationships and routines, may outweigh possible long-term benefits, particularly for older members of the work force. Olson notes that societies characterized by high levels of geographical and employment mobility, and by rapid economic change, also typically experience certain concomitant social costs -- such as high suicide and divorce rates, and serious problems with alcohol and drug abuse (Olson, 1985).

Banks and Tumlir (1985) argue that in the early post-war period western societies were able to withstand massive labour dislocations, and the evidence presented earlier in the study suggests that Canadians have adjusted to various kinds of pressures for change in the last few decades, in some cases with government intervention being limited to a social security net. Yet worker dislocation may be much more traumatic in contemporary conditions, where many traditional bonds, like those of religion and family, have become weaker or more tenuous than in the past. It is interesting that the country where the exit option has been implemented most consistently, Japan, is one in which traditional norms and attachments remain very strong. Moreover, change may seem more threatening and destabilizing to individuals when the general economic climate is volatile or negative. Sweden's leadership (among the countries under study) in labour shedding (see Appendix) should be seen in the context of a particularly strong and comprehensive social safety net which may serve to reduce the general level of individuals' anxieties about the personal consequences of economic vicissitudes.

These considerations suggest a significant role for communitarian claims in the formulation of adjustment policies. For example, a policy mix to address decline in a local industry might involve relocation assistance to younger workers (often eager to move if properly compensated), retraining for other sectors in the same community or region for middle-aged employees, and an early retirement package for older workers.

To economists, of course, policies which actually retard the speed of a market-driven reallocation of labour and capital are less justifiable than those which are merely compensatory. But in a morally pluralistic society, it is not enough simply to "pay off" the losers -- the values which they hold dear must continue to have a legitimate place in the policy process. This is well-put by Calabresi:

> A decision which recognizes the values on the losing side as real and significant tends to keep us from becoming callous with respect to the moralisms and beliefs that lose out.... it tells the losers that, though they lost, they and their values do carry weight and are recognized in our society, even when they don't win out (Calabresi, 1985).

A political perspective on the virtues of a policy of trade liberalization may have quite different implications from both the economic and ethical perspectives. Firms and workers concentrated in declining industries will often make highly salient political demands for continuing trade protection. In contrast to the concentrated stakes of these interests, the principal cost-bearers - ultimate consumers - typically have small per capita stakes in trade liberalization and are economically, geographically, and temporally a widely dispersed interest group that faces severe organizational and informational disabilities in mounting equally salient political demands for trade liberalization (Rowley and Tollison, 1986; Trebilcock, 1986, chap. 1). There are, of course, other interests that also stand to gain from trade liberalization - importers of intermediate inputs, retail chains, exporters - who do not face such severe political disabilities although their capacity to make politically salient anti-protectionist demands is likely to vary widely by issue (Destler and Odell, 1987). Thus, trade protection often offers concentrated, immediate, and visible benefits to the recipients while often rendering the costs less visible by spreading them widely over the economy and over time.

There is a complex relationship between arguments informed by the three ethical perspectives described above, and the political demand for protection and subsidies. Concentrated interests will usually appeal to various ethical claims in order to justify to voters at large the redistributive effects being sought. Similarly, where policies are adopted in response to demands by such interests, the goals of those policies will usually be justified in terms of ethical principles which make the losers (consumers) believe that these interests are not simply being sacrificed for the sake of other more concentrated interests, but rather in the name of some more general "common good". Voters will often not investigate whether in practice policies actually serve the ethical goals which are advanced to justify them (Lee, 1988).

This gap between rhetoric and reality is evoked by the overwhelming thrust of the empirical evidence in this study that rarely have protection and subsidies policies come close to achieving their stated goals, or have done so only at enormous cost. Further, postponing adjustment should not be equated with phasing it in gradually. Many policies which retard exit do not soften it -- the sundering of community ties comes just as suddenly and on at least as great a scale, even though it occurs at a later date. Indeed, as will be suggested in the empirical analysis which follows in subsequent chapters, retarding change may actually increase its dimensions and severity. In sum, the political explanation of trade protection and subsidies is consistent with the insight that at several levels values and ideas influence the formation of policies. But rent-seeking behaviour influences the interaction between ethics and politics, leading to ethically and economically perverse outcomes.

(3) The Choice of Trade Restrictive Instruments: Tariffs, Quotas, and Voluntary Export Restraints

Within the menu of available trade protection instruments, politicians will often face strong incentives to adopt the least efficient form of trade protection (Rowley and Tollison, 1986; Markusen and Melvin, 1984; Blackhurst, 1986). Tariffs, while distorting international comparative advantage, if applied on an MFN basis (i.e. against all foreign exporters) still leave open the possibility of the most efficient foreign firms successfully surmounting the tariff and competing effectively with domestic producers, thus maintaining competitive pressures on the latter to pursue efficient forms of adjustment or exit. Moreover, tariffs as a form of tax render the costs of protection relatively visible to the principal cost-bearers (domestic consumers). However, quotas will often be more attractive than tariffs to domestic producers and their work forces, precisely because they offer the prospect of a firmer guarantee of sustained levels of output and employment. Moreover, unlike tariffs, the costs of protection are rendered less visible to domestic consumers, manifesting themselves in scarcity rents captured by domestic producers and foreign producers in the event that they rather than importers are awarded the quotas. Not only are inefficiencies involved in guaranteeing domestic producers fixed market shares but if the quotas are applied on an historical basis they will freeze patterns of imports into pre-existing patterns, notwithstanding the possible emergence of even more efficient foreign competitors, who cannot obtain quotas. This inefficiency can be avoided and scarcity rents for foreign exporters eliminated if tradeable quotas are auctioned off by the domestic government to the highest bidders among local importers (who will buy imports from the most efficient foreign source). Domestic government also in this way avoid foregoing the tax revenues generated by tariffs (Bergsten, Elliott, Schoff, and Takacs, 1987). The price commanded by the quotas is also a visible measure of the margin of protection.

More politically attractive again than either tariffs or quotas may be "voluntary" export agreements or orderly marketing agreements negotiated bilaterally between an importing country and major sources of exports of a given product (Bergsten, 1975). Here, like quotas and unlike tariffs, domestic producers are guaranteed market shares, foreign producers are partly mollified through the capture of scarcity rents, and the costs to domestic consumers are largely concealed. But unlike MFN tariffs or quotas imposed under the safeguard clause of the GATT (Article XIX), where compensating domestic trade concessions or retaliatory withdrawal of foreign trade concessions must be contemplated by the country seeking to impose the tariffs or quotas, nothing need be given up in return for the agreement of foreign countries to restrain exports (under the threat of unilateral action if agreement is not forthcoming). Moreover, VERs and OMAs will typically be directed primarily against the most efficient foreign producers, in order to minimize the impact of imports on domestic producers, even though this imposes the greatest costs on domestic consumers.

From both utilitarian and social contractarian perspectives, trade protection would seem to be the least desirable instrument to shelter workers from the negative effects of adjustment to trade. Unlike direct compensation in the form of worker adjustment assistance, trade restrictions have economic costs in that they induce a misallocation of resources within the economy. They frequently cost consumers, through increased prices, an amount greater than the full income stream for each job preserved -- i.e., the costs of these restrictions are greater than would be those of a 100% labour subsidy. This suggests that only a portion of the rents which accrue to producers actually benefit affected workers. In effect, after the benefits to workers have been taken into account, one is left with a substantial net transfer of wealth from consumers to producers, a transfer which has no ethical justification.

From the communitarian perspective, trade protection of declining industries would seem (in contrast to more exit-oriented policies) consistent with the concern to preserve -- or at least prevent from too suddenly being dissolved -- existing community and social structures. Yet such restrictions do not by any means guarantee medium or long-term preservation of employment. They may merely provide the firm with time to relocate elsewhere, after it has recovered -- partly from the rents from protection -- more of its sunk costs. Communitarians would at the very least insist that the rents be reinvested with a view to modernization or other measures which ensure longer-term viability of jobs in the community, although modernization, through the substitution of capital for labour, will typically itself entail prospects of job loss.

(4) "Unfair" Trade Remedies

Apart from the political bias in favour of quotas, VERs and OMAs over tariffs, politicians also face strong incentives to characterize foreign competitive inroads as being the result of "unfair" trade and to apply contingent forms of protection to them or at least to allow or encourage legal harassment of foreign producers by domestic producers through permissive access to the domestic procedures by which contingent protection determinations are reached.

Anti-dumping duties are one such form of protection for domestic producers. The legal definition of dumping - selling in the export market at prices below those at which the product is sold in the country of origin - connotes no inefficiency or distortion whatever, outside very narrow cases of predatory dumping (selling at below cost) (Trebilcock and Quinn, 1979; Barcelo, 1971-2; p.491). But antidumping regimes almost never focus on these economically justifiable but exceptional cases and provide much broader-gauge protection to domestic producer interests.

Countervailing duties are another form of contingent protection. Here, the objection to foreign imports is that their competitive success in domestic markets is explained by the fact that they have been subsidized by government in the country of origin and thus their price superiority is artificially induced. While a more problematic case than "dumping" (at least as legally defined and applied), it can be cogently argued that although global efficiency may be reduced by such subsidies, domestic interests in the importing country are actually better off in aggregate as a result of the foreign subsidies. Domestic producers are worse off to the extent they are required to cut prices to meet the foreign subsidized price, but domestic consumers are better off by the same amount, and a further group of domestic consumers enjoy a pure welfare gain - those who could not afford the product before and now enter the market for the first time. A sober economic view of foreign subsidies of exports is that we should take their money and run, noting only our regret that the subsidies are not larger and timeless. Caveats to this view relate to foreign subsidization with predatory intent, and possibly domestically destabilizing temporary or intermittent foreign subsidies (Trebilcock and Quinn, 1979).

(5) Gradualism, Reversibility, Reciprocity

Short of complete rejection of trade liberalization, three other possible trade policy responses that are economically much more benign than complete resistance to trade liberalization require brief noting at this juncture (Richardson, 1980; pp.332-338). First, as was the case in the multilateral Kennedy and Tokyo Round tariff reductions, in the European Community's internal tariff reductions, and as is contemplated in the proposed Canada - U.S. free trade agreement, trade liberalization can follow a gentle phase-in trajectory. Such a policy has two obvious and offsetting effects. It attenuates adjustment costs by providing for a temporally dispersed rather than lumpy adjustment process. However, it also attenuates the benefits from trade liberalization. Economists are generally skeptical that economic welfare is often likely to be enhanced by this policy (Kaplow, 1986; Banks and Tumlir, 1986), and would see Economic Darwinism as the best recipe for efficient adjustment. Utilitarians may see a phase-out of trade restrictions as an appropriate policy for reducing the private costs of rapid adjustment (and sources of disutility), and Kantians may see a less deleterious impact on the least well-endowed in society. Communitarians will emphasize the importance of ensuring that communities are not destabilized by too rapid or too intense pressures for change. Gradual phase-in may allow for retraining or relocation to other jobs within the same community or region, or for early retirement policies which can avoid the stark choice between sundering communal bonds or forcing indefinite unemployment. Politicians may see in this policy a better temporal alignment of costs and benefits from trade liberalization. Given the short electoral time frames in which they are required to operate, policies (like trade liberalization) that may yield up-front costs and long-run benefits are antithetical to their political self-interest.

Second, provision can be made, as contemplated in Article XIX of the GATT, for temporary reinstatement of trade protection measures if trade liberalization threatens serious disruption to a domestic industry. The various implications of invoking this policy response are similar to those noted above for a phase-out strategy.

Thirdly, trade liberalization can be made conditional on reciprocal trade concessions by trading partners. While economists have long pointed out the economic advantages of unilateral trade liberalization if multilateral (or bilateral) trade liberalization cannot be achieved (Richardson, 1980; pp.307,308,335,336), a major advantage of reciprocity is that it provides some assurance to a country seeking to liberalize its trade policies that adjustment costs caused by greater import penetration can be partially offset by increased opportunities in export markets into which displaced resources can be redeployed (*Ibid*.; p.290). While, arguably, economic welfare is reduced by insisting on a principle of reciprocity (and thus may attract little support from an economic perspective), the ethical and political perspectives are likely to find it much more congenial.

(b) INDUSTRIAL SUBSIDIES

Industrial subsidies to declining sectors may take many different forms: they may be firm-specific or industry-wide; they may be designed to preserve output and employment (the stay option), or to facilitate rationalization and contraction (the exit option); they may take the form of outright grants, loans at below market interest rates, loan guarantees, or tax expenditures.

In evaluating the economic arguments for industrial subsidies to declining sectors, it is important to distinguish subsidies designed to avoid adjustment and those designed to facilitate it.

(1) Subsidies as a Form of Second-Best

With respect to subsidies designed to avoid adjustments, it is arguable that if we are unwilling to live with the economic implications of unfettered international comparative advantage, subsidies are economically to be preferred to trade restrictions because subsidies distort only production decisions but not consumption decisions whereas trade restrictions such as tariffs distort both (Richardson, 1980). For example, a tariff on imported textiles will both encourage inefficient domestic entry into the textile industry, and inefficiently reduce demand for both imported and domestic textiles because of the tariff-induced price increases. A subsidy to domestic producers may induce the first effect, but because textiles will continue to sell at world prices will not induce the second effect. This argument assumes that revenues needed to underwrite the subsidies can be raised by taxes that do not substantially distort consumption decisions elsewhere in the economy. This may be possible, but it is easy to imagine cases where consumption distortions will occur eg. as a result of an increase in general sales taxes. In short, from an economic perspective, first-best policy economically is complete trade liberalization, the second-best policy industrial subsidies, and the least desirable trade restrictions.

(2) Subsidies and Externalities

It has been argued that subsidies can improve the allocation of resources if they are responsive to various forms of externalities. For example, Schwartz and Harper argue that subsidies to agricultural production may be justified if there are widely held preferences in the community either that a certain portion of the population should remain engaged in agriculture and rural lifestyles or that the community should be self-sufficient in food in the event that foreign suppliers, for political or military reasons, choose not to sell food exports to us (Schwartz and Harper, 1970-71). The difficulty with this argument is that while it may be true that such preferences exist and that they are unlikely to be fully registered in the prices consumers are willing to pay domestic producers for their goods, it may equally be true that such preferences do not exist. Given the absence of a market in which these preferences can reliably be revealed, industrial subsidies in all kinds of contexts could be justified by speculative conjectures as to unrevealed preferences.

(3) Industrial Subsidies and Capital Market Imperfections

The Economic Council of Canada in a recent study of programs of government financial assistance to industry argues the possible existence of a "credit gap" that results in firms which present objectively equal risks to investors being differentially treated by the capital market (Economic Council of Canada, 1982). The Council points to disproportionately high transaction costs facing small businesses in obtaining loans, and disproportionately high costs and legal difficulties in small firms raising equity through small public offerings. These may result in a bias towards excessively highly leveraged capital structures in the classes of firms affected by such costs. This finding may then support a conclusion that government financial assistance to such firms may be warranted either on start-up or when financial difficulties are encountered.

In general, these arguments are not convincing. Other researchers have not found that small businesses encounter special difficulties in raising debt or equity capital (Trebilcock _et_ _al_., 1985). Even if this were so, it then would have to be demonstrated that government intervention in subsidizing the availability of financing could reduce the costs that private sector financial institutions face in servicing small businesses. If real social costs are involved, what comparative advantage does government possess in reducing these costs of providing capital? Finally, even if the argument and its policy implications are cogent, only small businesses seem to fall within its scope, not larger failing firms or declining sectors generally.

(4) Industrial Subsidies and Modernization of Obsolete Capital

It is often argued (principally by industry interests) that state assistance to facilitate capital modernization may be necessary to make a distressed industry internationally competitive. However, obsolete plant is often the _result_, not the _cause_ of loss of international competitiveness. Firms which are only able to cover variable costs are constrained to allow their fixed assets to run down and with them their long-term capacity. If an adequate return could be made on new fixed assets, presumably the private capital market would provide the funds required to make this investment. A government judgment that such an investment will yield long-run competitiveness and profitability will typically be at variance with this private capital market judgment and should, for this reason, be viewed with considerable circumspection.

(5) Industrial Subsidies and Strategic Pre-emption

Richard Harris in a study for the Macdonald Royal Commission proposes three major growth strategies for Canada: (1) multilateral or at least bilateral free trade; (ii) government support of high technology industries on a firm-specific basis; (iii) government support for premature automation in basic industries (Harris, 1985; chap. 7). The latter two proposals draw on some of the recent strategic trade policy literature and warrant comment.

With respect to Harris' proposal that government support the growth of high technology industries on a firm-by-firm basis and that in a small economy, "industrial policy necessarily involves a considerable degree of targeting" (Ibid.; p. 118), a series of difficulties must be noted. From a purely economic perspective, such a proposal is highly debatable. Do bureaucracies possess the kind of knowledge and expertise to evaluate technologically complex and economically highly risky projects any better than or indeed as well as private capital markets? While there may be economic advantages to a "first mover" strategy designed to pre-empt a market position in such industries, it is possible and indeed likely, that a number of countries will pursue this "racing" strategy simultaneously in the same sector with the risks (as Harris acknowledges) of a world glut of products in these sectors.

However, when one adds to the economic doubts of the wisdom of such a policy the practical problems of operationalizing it, it is not at all clear that the actual policy outcomes or impacts will be anything like those that Harris envisages. Harris correctly points out that across-the-board subsidies (through tax expenditures) to R & D suffer from problems of weak targeting -- the pay-offs from these expenditures will vary greatly from firm-to-firm and from industry-to-industry. He notes, for example, that an aerospace firm is unlikely to be successfully promoted through what are likely to be quite inadequate across-the-board R & D subsidies.

But firm-specific targeting, whatever its theoretical economic advantages, raises a set of extremely serious policy difficulties. What firms qualify for consideration for high-tech subsidies? What is high tech? As Roy George points out, (George, 1983) if processes as well as products are included, agriculture has strong claims to be considered as an example of a highly successful high-tech industry. Most established, basic industries can make similar claims for advances in some aspects of their production technology, as Harris' premature automation proposal acknowledges. Thus, the potential catchment area of applicants for support is likely to be largely unlimited and undefined. To the extent that very substantial, discretionary subsidies to particular firms are envisaged under Harris' proposals, incentives by firms to invest resources and energy on a large scale in rent-seeking will be magnified significantly, especially if the overall level of expenditures on R & D are increased as substantially as Harris seems to advocate. In this rent-seeking environment, in which very large prizes await the winners, it seems highly unlikely that the supply function for subsidies will remain non-politicized. Harris also suggests that firms that receive support but do not grow or penetrate export markets should be "cut off". Unfortunately, one of the first laws of politics is that a benefit once conferred can rarely be revoked, particularly if it is claimed that failure can be turned into success with a little more assistance, thus avoiding or at least deferring the political embarrassment of acknowledging failure, especially if a significant workforce has become dependent on the firm.

While Harris argues that inter-provincial competition for favourable locational decisions by firms should be avoided (how is not made clear), he also suggests that once a decision has been made by a firm to locate in Canada, government should be prepared to "push and pull" such firms to locate in depressed regions to mitigate the adjustment costs faced by declining sectors in those regions. This suggestion, however, explicitly introduces regional considerations into the granting of R & D subsidies on a firm-specific basis and cannot help but politicize the subsidy process further by introducing considerations that are unlikely to bear exclusively on the technical merits of proposals under review.

Many high-tech firms are not labour-intensive and it is not clear how locating such firms in regionally-depressed labour markets will help significantly in absorbing surplus labour (Bird, 1984), nor is it clear how easy it is likely to be to retrain such labour (e.g. redundant textile workers) for employment in many high-tech industries. Thus, it seems inevitable that firms promising more employment opportunities, whatever a firm's high-tech or growth potential, will receive favourable consideration in such a decision-making process, thus deflecting the process further from Harris' intended objectives. Moreover, constraining the provinces from engaging in inter-jurisdictional bidding wars for high-tech industries in order to avoid gaming costs and economic distortions in the spatial allocation of resources (as Harris advocates), is no easy task under the present constitutional division of powers, even if some political consensus were to emerge around the importance of focussing industrial assistance on high-tech firms. A further danger is that even if the federal government were to focus its resources in this way, provincial governments then may feel compelled to divert some of their resources to supporting economic activities from which the federal government had withdrawn its support, thus to some extent neutralizing the thrust of the federal government's industrial policies.

Other features of Harris' proposals raise similar concerns. He distinguishes between declining sectors, where orderly termination is prescribed, from basic industries (e.g. autos, rubber) facing competitive inroads from lower cost foreign competitors. As between protection, transfer of these activities to other countries, or subsidy, Harris argues for subsidies to support "premature automation", again on a strategic pre-emption rationale. However, declining sectors will make exactly the same arguments, and policy-makers will face intractable difficulties in distinguishing between firms that fall into Harris' two categories. Again, in the absence of clear and operational criteria, the subsidy process may well degenerate into a rent-seeking process where all kinds of non-economic considerations are likely to attract weight.

(6) Industrial Subsidies and Job Maintenance

It is often argued that evaluation of industrial subsidies designed to preserve output and jobs in a distressed sector should take account of both the direct jobs preserved and also secondary economic activities sustained or created as a result of preserving the industry.

This job maintenance argument at both the primary and secondary levels is suspect. As Usher has pointed out (Usher, 1981), for industrial subsidies to be effective in preserving jobs, it is necessary to assume that a subsidy has created jobs marginal to the recipient firm (that is, jobs that the firm would not have created in the absence of the subsidy). Even if this is true, a firm-specific subsidy will not increase employment in the industry of which it is part unless the jobs are marginal to the industry (that is to say, without the subsidy, other firms in the industry would not have increased their output and employment to absorb the share of the failing firm). Even if the subsidy creates jobs that are both marginal to the firm and marginal to the industry, are they marginal to the economy at large? Subsidies, by definition, have to be withdrawn from resources that would otherwise be employed elsewhere in the economy, and there is no reason to assume that the net employment effect of a subsidy will in fact be positive. The same argument holds for secondary effects. Positive multiplier effects in the sector receiving the subsidy may be offset by negative multiplier effects in the sectors from which the subsidy is raised. The effect of industrial subsidies on the overall level of economic activity must be judged against this demanding standard of incrementality, and will often be found wanting. In most cases, jobs will merely have been redistributed among sectors, with administrative costs incurred in the process and output foregone to the extent that efficient resource allocation is distorted.

(7) Industrial Subsidies as a Response to "Unfair" Foreign Competition

It is sometimes argued that industrial subsidies are an economically justifiable response to "unfair" forms of foreign competition, in particular foreign government subsidies of these sources of competition. Where countervailing duties are unlikely to be effective in neutralizing foreign subsidies (e.g. where both domestic and foreign industries are competing for third country markets, or the product in question yields a service that cannot readily be tariffed, as in shipbuilding), domestic industrial subsidies may be looked to to neutralize the foreign subsidies. It is true that foreign subsidies may obscure or undermine considerations of comparative advantage and that countervailing domestic industrial subsidies may reinstate them. While this may improve global efficiency, as noted earlier it is not clear that domestic interests are on net harmed, at least in the case of foreign subsidies of imports. In the absence of evidence of a foreign strategy of predation or evidence of destabilizing temporary or intermittent foreign subsidization, it may make economic sense for domestic consumers to enjoy the benefits of the foreign subsidies, treat them as a gift, and support the reallocation to other uses of domestic resources in the affected sectors (Trebilcock and Quinn, 1979). As Krugman points out, "in practice, an industrial policy aimed at meeting foreign [subsidized] competition would probably lead to government encouragement of investment precisely where the returns to investment are depressed by the targeting of other governments" (Krugman, 1984). Subsidies designed to neutralize foreign countries' subsidies of exports into third country markets (e.g. the subsidy war in wheat) present more problematic issues. Countervailing subsidies may be temporarily required to secure some leverage in negotiating a termination of the foreign subsidies.

(8) Industrial Subsidies and Congestion Externalities

It may be argued that in an extreme recessionary environment with very high levels of unemployment, a case can be made that in declining sectors with rigid wages and highly immobile labour, a temporary output subsidy may be cheaper than extended unemployment benefits, foregone tax revenues, additional demands on social services, and other costs. In other words, as a social welfare policy (not an economic policy), it may be cheaper to provide social assistance through temporary output subsidies to firms rather than through the social welfare system (Trebilcock et al., 1985; chap. 3). Such an argument, however, needs to be treated with extreme caution because the action it proposes clearly retards adjustment, at least in the short run, does nothing to facilitate the redeployment of redundant labour in the long run, and to a large extent perpetuates and reinforces the conditions which may make such a policy an optimal social welfare response in the first place. Moreover, the substantial gains to free trade relative to income losses that it may cause, as reflected in data to be detailed in Chapter II, suggest that it will be very rare indeed that these conditions are satisfied.

A similar argument that is sometimes made for temporary firm subsidies is that in generally or regionally depressed labour markets with very high levels of unemployment, mass layoffs create congestion externalities akin to decisions to enter an already overcrowded highway or to move to an already overcrowded city (Ibid.). Each worker's search efforts increase the search costs of other workers, but these costs are external to the relationships between workers and employers in firms or industries facing contractions and layoffs. On the other hand, search efforts of workers in aggregate may create offsetting positive externalities for potential employers by reducing their recruitment costs and for workers themselves in the form of information about market conditions obtained by some workers but of use to others. In the case of mass layoffs, however, it may well be that the negative externalities outweigh the positive. Potential policy responses might entail either taxing the source of these externalities or subsidizing the source not to produce them. The source in this context could be viewed in theory as either employer or employee in firms where mass layoffs occur, but distributionally and operationally it might be more tenable to view the employer as the source. This would suggest "taxing" the employer for mass layoffs, through such means as minimum notice periods and/or substantial severance payments or subsidizing the firm to maintain employment until the congestion in the labour market is reduced, presumably by an up-turn in the business cycle. Both policies present difficulties. Employers might view a tax on firings as constituting also an indirect tax on hirings, which might exacerbate unemployment conditions. A subsidy to maintain employment postpones the realization of the efficiency gains from reallocating the resources of the firm to more productive uses and does nothing to ensure that workers acquire skills that make them more employable in other occupations or sectors. Moreover, it is possible that the availability of subsidies to industries with potential layoff congestion problems will encourage more firms and workers to enter such industries (a form of adverse selection problem), thus largely undermining the effects of a subsidy designed to offset the congestion.

(9) Industrial Subsidies and Exit Costs

A further argument for industrial subsidies and related policies, while not seeking to maintain industry output and employment (as with all the above industrial subsidy rationales) but rather to facilitate downside adjustment, revolves around lumpiness in the downside adjustment process. Harris argues that firms are able to undertake an efficient adjustment to a decline in demand in competitive industries when there are no scale economies whatever (Harris, 1985). Here, the decline in industrial capacity is carried out by each firm gradually lowering its own capacity and hence employment. But if there is some degree of indivisibility in plant or firm size so that efficient industry adjustment to a decline in demand requires, that firms exit in some orderly temporal sequence, market forces may not produce this sequence. A case may thus arise, so it is argued, for a government role in managing adjustment to the contraction in demand, perhaps through "recession cartels", active promotion of mergers, or compensation for scrapping physical capacity. This argument is difficult to evaluate. If sound, it should apply equally to expansion in imperfectly competitive industries with scale economies as well as to contraction, and it quickly then generalizes to a case for pervasive government intervention in most industrial sectors. Moreover, it assumes that government can economize on transaction costs in this context in ways not open to private firms through mergers, specialization agreements, and other means. As applied to well-functioning capital markets, this assumption seems dubious. Conversely to Harris' view, it may be argued plausibly that the contraction problem, even in imperfectly competitive markets with scale economies, entails fewer inefficiencies than the expansion problem. With expansion, there may be surplus-dissipating races to pre-empt additions to the market. With contraction, each producer drops out as its quasi-rents fall to zero. There is no racing or gaming problem, and no firm can credibly threaten to add new capacity. Exit is likely to occur in reverse order of age of facilities.

Further objections to this rationale for government intervention in the adjustment process emphasize the dangers of bureaucratic involvement in detailed industrial restructuring, in terms of relative institutional competence, and also the dangers of fostering anti-competitive forms of collusion in the industry in seeking agreement on future industry structure (Lawrence and Litan, 1986).

In sum, all the above rationales for industrial subsidies to depressed sectors either are economically unsound or appear to justify application to very narrowly circumscribed sets of circumstances. We are thus left with the principal economic vice of industrial subsidies - noted at the outset-that they distort production decisions. They also entail significant administrative costs, and rarely offer offsetting economic benefits.

In terms of an ethical perspective, can more be said in favour of industrial subsidies to declining sectors? From a utilitarian perspective, industrial subsidies designed to preserve the stay option (ie. preserve output and employment) mitigate both the social and private costs of adjustment. Moreover, to the extent that risk is an independent source of disutility (which, assuming that most individuals are risk averse, is a reasonable assumption), industrial subsidies mitigate the risks of change for those who stand to be prejudiced by change. However, utilitarianism would also weigh the disutilities to others from resisting change - the direct costs of the subsidies, the administrative costs of dispensing the subsidies, foregone production and consumption in other sectors from avoiding the reallocation of resources to higher valued uses. With respect to the disutility associated with risk, utilitarians may be skeptical that investors are nearly as risk averse as employees, in that the firms in which they invest can diversify risk through product diversification and investors themselves can diversify risk through portfolio diversification. Moreover, utilitarians, like economists, would be concerned with the risk-incentive trade-offs likely to be generated by industrial subsidies (Kaplow, 1986). Subsidies designed to preserve output and employment in a given sector are likely to attract additional resources into the sector - a form of adverse selection problem - that will exacerbate the original misallocation problem. And if a general and permanent policy of providing industrial subsidies to depressed sectors is announced, there will no longer be appropriate incentives to avoid over-investment in such sectors at the outset. To the extent that employees are less well able than investors to diversify away the negative risks of change, utilitarians may see a stronger case for subsidies, but would be concerned, as with investors, with the incentive effects of such subsidies (again, the risk-incentive trade-off), and would also be concerned with whether alternative policies to industrial subsidies might be devised that more finely target the risk of change for workers without also subsidizing other interests (eg. investors), for whom private market options can yield desired risk-incentive trade-offs.

Kantian social contractarians are likely to be equally skeptical of industrial subsidies. When designed to preserve the stay option or to moderate the effects of sudden transitions, they may, on occasion, alleviate the plight of the least advantaged in our society (e.g. low-income, low-skilled, relatively immobile workers). However, in many cases the workers at risk will not fall into this class, and the investors for whom risk is alleviated will almost never fall into this class. As with utilitarianism, much more finely targeted policy instruments seem indicated by this ethical perspective.

From a communitarian perspective, subsidies should ideally create jobs which have a long-term viability in the region or community whose future is threatened by industrial decline. They might therefore best be oriented towards employment creation in other sectors, or towards rationalization or modernization which reverses the process of decline. However, subsidies which merely postpone inevitable dislocations will not be justified unless this postponement genuinely makes the readjustment of community ties more gradual and natural, or permits the time needed for retraining or search for alternative work in the same community or region.

While less politically attractive than trade restrictions, because they entail on-budget expenditures, subsidies share some of the other attractive political properties of trade restrictions. To the extent that industrial subsidies are designed to preserve the stay option rather than facilitate the exit option, they avoid potentially costly acknowledgments that a sector is a loser and that government can or will do nothing to arrest its decline and avoid the consequential exit costs for interests dependent on it. Like trade restrictions, industrial subsidies can assuage both investors and workers simultaneously that they will not have to bear the costs of exit, and thus the support of two major political constituencies can be engendered. The production distortions generated by industrial subsidies will have negative employment and consumption effects in other sectors over time but the impact on the bearers of these costs (future employees and consumers) will be thinly spread geographically and over time and may be barely perceived or viewed as causally related to the government's industrial subsidy policies in depressed sectors. The direct costs of underwriting industrial subsidy programs will, of course, be borne by taxpayers. Again, like future employees and consumers, they are a widely dispersed political constituency who face major organizational and informational disabilities compared to the much more concentrated stakeholders who stand to gain from industrial subsidies. The information costs faced by taxpayers can also be exacerbated by strategic choice of the form of the industrial subsidy. By use of loans at below market interest rates, loan guarantees, credit insurance, and tax expenditures, a government may be able to move a large portion of the costs of industrial subsidies off-budget and render them less visible.

Since subsidies are expenditures from the public fisc they are unlikely -- in contrast to trade restrictions -- to have concentrated interests opposed to them. While importers, distributors, retailers and domestic industries stand to lose particularly heavily from trade restrictions, all taxpayers contribute, proportional to their general revenue contribution, to subsidization. An exceptional case will be firm-specific subsidies, which may be opposed by competing firms which are viable without subsidization.

It may also be argued that exit-oriented industrial subsidy policies (eg. compensation for scrappage of capacity) can be justified on grounds of political pragmatism. If economic efficiency would dictate the contraction of a domestic industry in the face of lower-cost or superior foreign imports, but domestic losers would seek to exert political vetoes on the withdrawal of trade restrictions, compensating the loss of domestic capital may be argued to be a necessary "bribe" to realize more liberal trading conditions.

There are at least two reasons for skepticism in evaluating this argument. First, exit-oriented industrial subsidies at best will buy off investor interests, not labour interests. Second, any "bribe" less generous than the capitalized present value of the future stream of benefits from the preservation or imposition of trade restrictions will not render investor interests indifferent between the two sets of policies. But a "bribe" on this scale of generosity will constitute a tax on domestic consumers and taxpayers almost equivalent to the cost to them of the trade restrictions avoided, thus largely neutralizing any gains to them. Moreover, because the "bribe" will entail clearly visible, determinate, up-front costs while any net gains from trade liberalization will be long-term, less determinate, and less visible, the prospect of underwriting such a bribe may have little political appeal to the cost-bearers (Quinn and Trebilcock, 1982).

(c) STRUCTURAL POLICY RESPONSES

(1) The Market for Corporate Control

An economic perspective would generally be skeptical that an activist role on the part of government is called for in facilitating efficiency-enhancing structural adaptation in trade-impacted sectors. Economic Darwinism would be perceived as the best recipe for promoting efficient forms of rationalization, including contraction. Write-offs of the value of physical capital as a result of changes in competitive conditions are viewed as purely private losses, not social costs. Society now revalues these assets at whatever they may be worth in their next most highly valued use. There is no efficiency rationale for preventing these losses or compensating for their occurrence. For the most part, government can best facilitate the reallocation of physical capital by removing legal impediments to its mobility (Banks and Tumlir, 1986). For example, unduly restrictive anti-trust policies toward firm mergers, especially in depressed sectors, restrictions on foreign take-overs or mergers, provincial securities laws that impose costly conditions on take-over bids through "follow-up offer" requirements, and corporate law rules that permit incumbent directors to take defensive measures in the face of a take-over bid may mute market processes that induce private rationalizations and restructurings. Tax policies that constrain the ability of acquiring companies to claim accumulated losses incurred by firms taken over may be another example. Efficiency-based modifications to these policies would all be directed to speeding up market-adjustment processes as they bear on the reallocation of physical capital, rather than retarding them (Trebilcock et al, 1985; chap. 10).

(2) Bankruptcy

On the other hand, it has been argued that market forces will sometimes lead to premature termination of firms in financial difficulties, resulting in inefficient reallocation of resources (Trebilcock et al., 1986, chap. 4; Papillon, 1988; Jackson, 1986, chap. 9; Quinn, 1985; Bebchuk, 1988). It is argued, for example, that our present bankruptcy laws may create incentives for well-secured creditors to "pull the plug" on firms with a potential for restructuring into new product lines, rationalizing or down-sizing productive capacity over time, or modernizing production processes. Transaction cost and strategic behaviour considerations may inhibit the major stake-holders (various classes of shareholders, various classes of creditors, employees) from negotiating a post-insolvency bargain that will maximize the value of the company's assets. How serious a problem premature (economically inefficient) bankruptcy is empirically is difficult to judge. The costs, delays, and inefficiencies of the bankruptcy process itself create significant countervailing incentives for the major stake-holders to avoid bankruptcy in many circumstances, even perhaps in cases where, absent these costs, bankruptcy and subsequent redeployment of assets would be an efficient outcome. In this context, proposals for the adoption of bankruptcy policies modelled on Chapter XI of the United States Bankruptcy Act, which would constrain the ability of secured creditors to enforce their security against firms undergoing court-supervised reorganizations and authorize the court to impose ("cram-down") reorganizations on shareholders and creditors, may perhaps have economic merit; so, too, may suggestions for modifying voting rules with respect to voluntary proposals to reduce hold-out and strategic behaviour problems and thus facilitate voluntary reorganizations. However, in both cases the prospect of ex post modification of the terms of financial instruments is a risk that is likely to be reflected in the ex ante terms on which capital is made available to firms, so that it is difficult to be confident that constraints on the ability of creditors or shareholders to enforce the initial terms of their investments will lead to superior long-run resource allocations.

(3) Government-Induced Rationalization Plans

More activist government strategies in promoting downside industrial restructuring would generally be viewed with skepticism by economists. For example, conditionalizing temporary trade protection or industrial subsidies on firms in a depressed industry agreeing to some government-sanctioned rationalization plan would seem to rest on the premise that market forces are unlikely to yield an efficient form of rationalization. This would seem to implicate the dubious argument concerning lumpiness in the downside adjustment process, discussed above in relation to industrial subsidies. It would also implicate the concerns noted in that context of non-expert bureaucratic involvement in detailed industry planning, and of fostering anti-competitive forms of collusion in the industry in question (Lawrence and Litan, 1986; Lawrence, 1987).

(4) Nationalization

The limiting case of state involvement in a depressed industry would be nationalization (state ownership). Most economists would regard this policy response as sharply antithetical to efficient adjustment. Neither the state nor its agents are likely to have nearly as strong economic incentives as private investors and their agents to utilize or redeploy the resources in question efficiently (Borcherding, 1983). Moreover, once the government assumes ownership of a depressed industry, it will be perceived by affected interests as directly responsible for the future of the industry and less able to distance itself politically from the costs of transition. On the other hand, it can be argued that in particular contexts, public ownership may reduce transaction costs for government. Policy co-ordination may be most efficiently pursued by internalization of the process within a single public enterprise if the government is attempting to co-ordinate a multiplicity of policy objectives. Often these objectives cannot be precisely specified because they are, by their nature, unquantifiable or because there are novel or uncertain features in the economic, social or political environment surrounding the activities in question which call for constant redefinition of objectives or redefinition of trade-offs among objectives. In such cases, public ownership may be preferable to a less flexible, more formal, legal-orders oriented regime directed to a multiplicity of private sector economic agents. This argument derives from theories of the firm that seek to explain the integration of economic activities within firms rather than through reliance on "contracting out" with owners of the various factors of production (Trebilcock and Prichard, 1983).

In a depressed industry context, where the government is attempting to orchestrate an "orderly" rationalization and contraction of an industry to moderate or attenuate adjustment costs, it is at least theoretically conceivable that co-ordinating staged reductions in capacity, specialization in particular product lines, mergers, lay-offs, retraining and relocation programmes and encouragement of new industries to locate in the affected regions may be more efficiently achieved through a single enterprise than through a loosely coordinated set of separate policies and programs.

From an ethical perspective, utilitarianism would seem to closely track the economic perspective with respect to structurally-oriented policy responses. Social contractarianism would not accept a set of structurally-oriented policy responses as a substitute for dealing compassionately with least advantaged workers and similarly situated individuals affected by the adjustment process. Communitarianism also would reject structural policies that radically disrupt deeply entrenched community ties.

Politically, laissez-faire structural policies, such as an unconstrained market for corporate control and permissive bankruptcy policies, may entail dislocation costs that in many contexts will prove politically difficult to sustain. On the other hand, government-sponsored rationalization plans will pose many of the same political difficulties as exit-oriented industrial subsidy policies (canvassed above), as well as rendering it difficult for government to extricate itself from a perceived role as ongoing guarantor of the welfare of the industry, thus exposing itself to the risks of opportunism and repeated rent-seeking on a serious scale. Similarly, but more extremely, nationalization of a declining industry dramatically reduces a government's ability to distance itself from the subsequent fate of the nationalized industry and makes it highly vulnerable to repeated demands by dependent interests for further stay-oriented assistance.

(d) LABOUR MARKET POLICIES

As with the other classes of policy instruments reviewed, it is again important to distinguish between those labour policies that respond to adjustment pressures by attempting to preserve the stay option from those designed to facilitate the exit option. Wage subsidies to preserve existing jobs and to a lesser extent generous and unconditional unemployment insurance benefits fall into the first category, while retraining programmes, severance payments, wage subsidies and income insurance operative on re-employment, and relocation allowances fall into the second.

(1) Stay-Oriented Labour Policies

From an economic perspective, the first set of labour policies is likely to be viewed as possessing few economic virtues. Wage subsidies to preserve existing jobs would be viewed as having least merit. Unemployment insurance may have the economic value of facilitating more effective job search and thus promoting more efficient job matches. In addition, given that risk aversion as a source of disutility can be viewed as an economic cost that many individuals would be prepared to pay something to avoid, unemployment insurance can be viewed as reducing the costs of the risks of job displacement. However, economists would also be concerned with the risk-incentive trade-off. Generous and extended unemployment insurance benefits reduce incentives to make appropriate employment decisions at the outset as to which sector to seek employment in (if the risks of subsequent lay-offs are shifted to others) - a form of adverse selection problem - and once lay-off occurs reduces incentives to seek employment elsewhere - a form of moral hazard problem. Economists would be concerned that unemployment insurance programs be devised so as to mitigate these adverse selection and moral hazard problems by preserving appropriate risk-incentive trade-offs.

(2) Exit - Oriented Labour Policies

With respect to labour adjustment programs designed to facilitate exit by easing the costs for labour associated therewith, economists would acknowledge a case for subsidizing labour adjustment costs in declining sectors in the form of subsidies for retraining and relocation. Essentially, the argument points to imperfections in the market for human capital. Particularly in the case of general (as opposed to specific) human capital that can be used in several occupations or industries, employers may underinvest in worker training because the benefits of that training can be appropriated readily by other employers without compensation. Workers themselves may be unable to finance the costs of general training by such means as wage reductions during the training period, or to meet the opportunity and direct costs of institutional training, in part because of inability to borrow against expected future income streams, which can only effectively be pledged as collateral by pledging their own future services. This arrangement might be viewed as a contingent form of indentured servitude and may not be legally enforceable. Thus a case emerges for subsidizing, at least in part, the opportunity and direct costs of general training or retraining, although the argument does not discriminate between the two and does not in itself support a case for special retraining subsidies for workers laid off in trade-impacted sectors. Rather, it supports a case for subsidizing the availability of general institutional and on-the-job training and retraining programs for unemployed workers, whatever the source of the unemployment. In addition, even in relation to some specific forms of human capital where economies of scale or specialization in its formation make institutional training more efficient than on-the-job training by employers, efficiency objectives might be served by providing loans (although not necessarily outright grants) to trainees to finance these costs of training or retraining. Moreover, it might be argued that in the case of highly specialized investments in human capital, the worker assumes a high degree of undiversified risk relating to the continued value of his or her investment and, if risk averse, would wish to be insured against substantial depreciation of his or her capital as a result of exogenous changes in his/her economic environment. If private insurance markets are incomplete and are unlikely to provide such insurance, a case might be made for some form of social insurance, although again problems of adverse selection and moral hazard that may explain why such insurance is not widely available in private markets may cause economists to ask whether governments are better able to contain these effects than private insurance markets (Kaplow, 1986). Or, to put the issue another way, can government achieve a more efficient risk-incentive trade-off than private market arrangements?

From an ethical perspective, utilitarianism would seem closely to track the implications of the economic perspective on labour adjustment costs. It would underscore the fact that the costs of change include both social and private costs and that individuals may well be risk averse with respect to both sets of costs and desire insurance, private or social, against these costs. However, utilitarians, like economists, would also be concerned with the costs, direct and indirect, of providing such insurance (these costs necessarily being a source of disutility to others) and would seek to maximize average utility by maximizing benefits net of costs. It has been argued that utilitarians would be sensitive to one set of costs that may not be weighed in the economic calculus - disaffection costs. Michelman has argued that where the source of disutility to individuals is a change in government policy (such as trade liberalization), those negatively affected may sustain "disaffection" costs as a result of a perception that the collectivity is singling them out to bear the costs of a policy change that will benefit others but without any sharing in the gains obtained by the latter (Michelman, 1967). In effect, this is a claim that the collectivity should write an actual Pareto superior social contract (where some gain but nobody is worse off) rather than a Kaldor-Hicks or hypothetical social contract where the gains to the gainers exceed the losses to the losers but where actual compensation to the losers need not be paid.

Kaplow has persuasively critiqued this view (Kaplow, 1986). If the policy change in question is the result of tyrannous, malevolent or perverse behaviour on the part of its supporters, then of course it is unlikely to survive either the standard economic welfare calculus or the standard utilitarian calculus and from either of these normative standpoints should be abandoned. If, on the other hand, it can be reasonably assumed that the policy change meets these two normative standards and is, on balance, welfare or utility enhancing, Kaplow argues that no special case for compensation can be made out. Kaplow gives a simple example to support his argument. Suppose a product that has been on the market for some time is now found to present serious health hazards (eg. thalidomide, asbestos) and the government decides that social welfare would be enhanced by banning its production and sale. Is there any stronger case for compensating investors, workers and secondary dependent interests in the industry in question for losses associated with the ban than if the product in question had lost its market because of shifts in demand (eg. buggy whips, horse-drawn carriages, obsolete computers)? Kaplow argues that the risk incentive trade-offs are exactly the same in the two cases. In both cases, we want manufacturers, workers and related interests to face incentives in making investment or vocational decisions that take account of the probability (risk) that the product in the future may no longer increase social welfare, and to adapt their behaviour accordingly. By shifting risk to the state in either case, incentives will be created, in the case of hazardous products, to take less than optimal precautions in investigating and monitoring the safety characteristics of products offered for sale, and in the case of products that lose their market because of shifts in demand, to make less than optimal investments in R & D and marketing research to identify and develop new products that are likely to generate increases in consumer welfare.

By way of analogy, in the case of trade liberalization, we would wish firms and workers in making investments and vocational decisions to take account of possible future changes in trade policy that will enhance consumer welfare, perhaps reflecting increasing costs of trade protection as comparative advantage continues to shift.

In a Kantian social contractarian ethical framework, labour adjustment policies would be endorsed to the extent that they enhance the welfare of the least advantaged in our society. Relative to the economic and utilitarian frameworks, this suggests a narrower focus on that subset of displaced workers who satisfy this criterion. Here, compensation for both social and private costs of change would seem prescribed, although the Rawlsian version of social contract theory would seem to accept that this should be done in the most efficient available way. Thus, as between stay-oriented and exit-oriented labour adjustment policies and as between "universal" and targeted labour adjustment policies, this perspective would probably favour labour adjustment policies that ease the costs of transition for that subset of workers whose limited endowments render the costs of change to them especially burdensome.

Some communitarians may be, however, quite vehemently opposed to mobility-oriented labour adjustment policies. These policies will create incentives for the younger and better educated workers -- for whom the individual self-development opportunities of change may outweigh the loss of communal ties -- to leave the affected region or community. It is these workers who will be most needed for the community's economic renewal and to ensure its long-term viability.

An unresolved tension, however, in the communitarian approach is whether its focus is on the effects on the individual of dissolving community ties, or the intrinsic value of preserving existing communities. The latter answer is suggested by the constitutionalization, in Canada for example, of inter-regional equalization goals. The former by contrast seems to be implicit in the work of critics of liberalism such as Sandel who accept the liberal view that ethical claims must emanate from the identity and needs of the individual but argue that these needs are closely connected in most cases with community ties. On this view, exit-oriented labour policies might be targeted on those younger workers who may have more to gain psychically by leaving than staying with the more stay-oriented options oriented to older workers, whose community ties are likely to be more thoroughly entrenched.

From a public choice-political perspective, politicians will find labour adjustment policies of all kinds less attractive than either trade restrictions or industrial subsidies. First, they are responsive only to the costs of change faced by workers, and not those faced by investors or other dependent interests. Second, they entail wholly on-budget expenditures, which render the costs of the policy highly visible. Thirdly, some labour adjustment policies may entail a potentially politically costly admission that a given sector cannot or will not be preserved on its present scale and in its present form, and that government is prepared to acquiesce in its decline. These political costs can be attenuated somewhat by adopting labour policies that favour the stay rather than the exit option. Thus, wage subsidies to preserve existing jobs and generous unemployment insurance benefits that underwrite the costs to both employees and employers of recurrent lay-offs and attenuate pressures on unionized work-forces to accept wage concessions in the face of lower wage costs on the part of foreign competitors, are likely to be given greater weight than labour adjustment policies that underwrite the costs of exit through retraining, relocation and severance subsidies.

The argument that generous assistance to displaced workers enables politicians to buy off political vetoes on welfare-enhancing changes in trade policy is likely to be viewed sceptically by politicians. First, such assistance does nothing to buy off resistance from investor and other dependent interests. Second, if the level of assistance must be such as to leave displaced workers entirely indifferent to the social and private impacts of the trade policy change in order for all resistance to be overcome, the financial implications of such a program for taxpayers are likely to be viewed as formidable. Third, in evaluating the net political returns from such a scale of expenditures, politicians will inevitably ask themselves whether larger political returns can be garnered from a similar scale of expenditures anywhere else across the political landscape or whether other policy instruments such as trade restrictions are likely to entail lower political costs. It would seem that often the answer is likely to be affirmative (Quinn and Trebilcock, 1982). Fourth, it is argued that to the extent that existing rigidities in labour markets are the result of restrictive labour market practices sanctified or imposed by law, governments have no political interest in neutralizing these policies by adopting countervailing policies designed to produce opposing effects (Banks and Tumlir, 1986, pp. 30, 31). This argument is not wholly convincing. To the extent that e.g. minimum wage laws and industry-wide collective bargaining introduce wage rigidities into an industry that prevents it from responding effectively to import competition, a government may not feel politically able to attack these economy-wide "infrastructures" policies directly, but may feel able to mute their most dysfunctional effects in particular sectors under import pressure through subsidized exit-oriented labour policies as an alternative to trade restrictions, further accelerating the substitution of capital for labour which may be the only prospect the industry has of retrieving a measure of international competitiveness.

(e) MACROECONOMIC POLICIES

To this point in the chapter, we have assumed that trade-related adjustment pressures are the result of genuine shifts in international comparative advantage and reflect a genuine loss of international competitiveness. This assumption cannot be taken for granted. It may be the case that trade-related adjustment pressures are at least in part a result of misconceived domestic macroeconomic policies. As Krugman notes: "Many economists believe that the U.S. budget deficit is largely responsible for the rise in the U.S. trade deficit, because the budget deficit drives up interest rates, [which in itself, it should be noted, raises the costs of capital for domestic firms seeking to rationalize], high interest rates attract foreign capital inflows, these inflows raise the value of the dollar, and the strength of the dollar reduces U.S. competitiveness" (Krugman, 1986). In effect, a 25% increase in the value of the dollar relative to the currencies of major trading partners is tantamount to a 25% tax on exports and a 25% reduction in the price of imports, including existing tariffs on imports. Similar arguments can be made about Canadian macroeconomic policy, although it has a much less important effect on international interest rates and exchange rate movements than the much larger U.S. economy (Wonnacott, 1987). Other arguments pertain to better multilateral management of exchange rate movements to correct for serious misalignments caused by rapid international capital flows rather than goods flows (Hufbauer and Schott, 1985).

Obviously, from an economic perspective, budgetary deficits should be eliminated or reduced by cutting expenditures or raising taxes or some combination of the two, if long-run economic welfare, as measured in national income statistics, is to be enhanced. Utilitarianism would probably reach similar prescriptions, although being more sensitive to the private costs of tax increases and expenditure reductions, as well as (more debatably) perhaps attaching special weight to "disaffection" costs. Social contractarianism would, on the other hand, resist macroeconomic policy adjustments that entailed reductions in social expenditures that accrue to least advantaged groups, presumably favouring other forms of expenditure reductions and increases in taxes on the more wealthy. From a political perspective, it seems clear that both the U.S. and Canadian governments, struggling with chronic budget deficits, have had difficulty finding political support for either significant tax increases or expenditure reductions.

III. CONCLUSIONS

Both the economic and utilitarian ethical perspectives are likely in most cases to favour labour adjustment policies that ease the costs of transition for labour rather than preserving the stay option, which entails sacrifices in welfare or utility for those that would stand to benefit from a more efficient allocation of resources. The social contractarian ethical perspective would focus more narrowly on the adjustment costs faced by that subset of workers who are amongst the least advantaged members of our society. It may be the case that in some contexts only trade restrictions are capable of protecting their welfare because of the lack of any other viable policy, but social contractarians would accept that their welfare should be enhanced in the most efficient way (ie. by not incurring unnecessary sacrifices in the welfare of others) and in most contexts policies other than trade restrictions, industrial subsidies, and stay-oriented labour policies would seem available that would meet this normative goal. Communitarians will prefer policies which preserve jobs within communities affected by adjustment, or create new jobs in other sectors in the same community or region. They will, however, prefer employment maintenance subsidies over trade restrictions, since the latter do not necessarily guarantee preservation of employment but only of output (i.e., management may still substitute capital for labour, producing the same output with fewer workers).

It seems unlikely that either the economic perspective or the three ethical perspectives would suggest any distinction between adjustment costs induced by changes in trade policy, changes in trade patterns (without changes in trade policy), or changes in resource values as a result of changes in demand, technological change or changes in productivity. Indeed, most studies have found that factors other than trade impacts tend to account for the bulk of declines in industry employment (Krueger, 1980; Wonnacott, 1987, p. 19).

The economic case for exit-oriented labour adjustment policies focuses on imperfections in human capital markets that are independent of the source of job displacement. Moreover, the administrative costs of attempting to distinguish lay-offs caused by any one of these reasons, when all are likely to be at play in any given industry are likely to be substantial. The utilitarian perspective would closely track the economic perspective, unless one accepts that special "disaffection" costs attach to adjustment costs caused by a deliberate change in government policy. The social contractarian perspective does not require that every single transaction or policy in society meet its normative criteria provided that the "basic structure" of society meets these criteria. If other government policies can be deployed to complement the policy change in question so as to protect or enhance the welfare of the least advantaged while not foregoing the social gains from this policy change, then such a set of policies would satisfy Rawls' "difference" or "maximin" principle. The communitarian perspective would seem the least consistent with the economic approach, since the stay option would seem the most obvious way of protecting existing communal or regional ties. Yet communitarians would still favour policies that allow for the long-term viability of communities and regions, not short-term job maintenance -- hence communitarians as well will not be entirely insensitive to the need for positive adjustment.

From a positive or descriptive political perspective, it will have become evident from the analysis in this chapter that political incentives on the part of both demanders and suppliers of policies tend in the direction of a complete inversion of the policy prescriptions implied by both the economic and ethical normative frameworks. That is to say, in the face of trade-related adjustment pressures, politicians will face strong pressures to maintain or increase trade restrictions, whether or not the adjustment pressures are caused by prior or prospective changes in trade policy, or simply shifts in comparative advantage. As a second-best policy, industrial subsidies will be favoured. As a distinctly third-best policy, labour adjustment policies will usually be favoured, but even then with a bias towards stay-oriented labour policies rather than exit-oriented labour policies. It is not clear that the political considerations generating these biases will be significantly influenced by whether job displacement is the result of changes in trade policy, shifts in comparative advantage, productivity improvements, or shifts in demand. Within a given industry where all of these factors are at play (eg. the U.S. steel industry), it is difficult to imagine how a government could politically defend differential treatment of workers laid off for any of these reasons (Lawrence and Litan, 1986). Nor is it so obvious how a government could politically defend more generous treatment of all workers displaced for any reason in such an industry than that provided to workers displaced in another industry unaffected by trade impacts but eg. shifts in demand (eg. asbestos/tobacco).

The ensuing three chapters will examine how governments in a selected number of industrialized countries have wrestled with the divergent dictates of these economic, ethical and political perspectives in formulating adjustment responses for their troubled economic sectors.

I. INTRODUCTION

(a) Outline of Chapter

In this chapter, we address two major classes of issues: the economic costs and benefits of trade restrictions, and the political determinants of the demand for trade protection policies. We begin our discussion of the first class of issues by sketching the basic theoretical argument underlying the case for a liberal international trading regime. We then trace the application of the liberal trade idea in the post-World War II era. The inauguration of the General Agreement on Tariffs and Trade (GATT) in 1947 ushered in a period of substantial trade liberalization. However, beginning in the mid-1970's, in the face of oil price shocks, recessions, and the emergence of vigorous new international competitors like Japan and the N.I.C.'s, we have witnessed a partial retreat from the path of increased trade liberalization and instead the rise of the so-called "new protectionism".

Section II of this chapter reviews the empirical evidence on the costs and benefits of trade restrictions in the countries and sectors under review, and concludes from the evidence that in all cases the costs have substantially exceeded the benefits.

This presents a puzzle which we take up in section III: why would nation states adopt policies that generate more costs than benefits for their citizens, irrespective of their impact on citizens of foreign countries whose exports are constrained by such policies? This requires an analysis of the political determinants of the demand for and supply of trade protection policies. We sketch some of the major theoretical models of the political process in the trade policy context and point out their weak explanatory and predictive properties. We then review the empirical evidence on the political determinants of trade protection and find that the evidence does not yield robust inferences of the critical political variables. We conclude that there is no iron law of politics that drives democratically elected governments inexorably to the adoption of trade protection responses to trade impacts on domestic industries. This suggests some significant scope for a rationalistic politics even within existing political structures and the potential for further enhancing such a politics through institutional reforms that more fully enfranchise the principal bearers of the costs of trade protection.

(b) The Basic Theory of International Trade

The basic economic theory of the mutual gains realizable from international trade, despite many modern refinements and elaborations (Harris, 1985), is in essence simply an aspect of the more general economic theory of the mutual gains from exchange in any voluntary contractual relationship. These gains were long ago demonstrated by Adam Smith in The Wealth of Nations, and his famous pin-making example still today serves to illustrate the gains to be realized from specialization and exchange. Few of us find it rational to grow all our own food, produce all our own clothing, build our own shelter, administer our own medical services, etc. In its extreme form, this kind of self-sufficiency or autarky entails an existence similar to that of the hermit or caveman. In fact, most of us specialize in producing goods or services for others and for some of our own consumption needs while buying goods or services for other needs from producers who specialize in their production. But if this kind of specialization within communities is rational, Smith argued that specialization and exchange among members of different communities is equally rational. He rejected then current mercantilist notions that buying imports transferred scarce gold currency into foreign hands, diminished national wealth, and reduced domestic employment. Thus, on Smith's theory of the gains from specialization, it makes no sense for Canadians to attempt to produce their own rice or pineapples if these can be purchased from foreigners more cheaply because of different endowments in climate, soil, skills, etc. On the other hand, it may make no sense for producers in these foreign countries to build their own telephone systems or hydro-electric generators if we can supply them at a higher quality or lower price.

David Ricardo early in the nineteenth century extended Smith's theory of absolute advantage into a theory of comparative advantage that sought to demonstrate that even countries that are less efficient than other countries in everything they produce will still find it rational to trade. Ricardo's example of Portugal and England trading wine for cloth even though England was a higher cost producer of both but enjoyed a smaller cost disadvantage in cloth, could easily have been modified to make the same point about purely domestic producers of wine and cloth with different production costs in respect of each. Indeed, Samuelson uses a similarly motivated example to show why, for example, a lawyer who also types more quickly and efficiently than her secretary will nevertheless specialize in the provision of legal services and buy secretarial services from her secretary, because this reflects where the lawyer's comparative advantage is greatest and where the secretary's comparative disadvantage is smallest (Samuelson and Scott, 1980; p. 807).

An unfortunate semantic legacy of Ricardo's demonstration of the gains from international trade that has been perpetuated in the terminology of much subsequent trade literature and debate is that in international trade countries are trading with each other. This, of course, is rarely the case. As in purely domestic exchanges, private economic agents (albeit located in different countries) are trading with each other. In its most rudimentary form, all that international trade theory seeks to demonstrate is that free international trade dramatically broadens the contract opportunity set available to private economic agents and hence the mutual gains realizable from exchange as parties with different endowments of specialized skills or resources are able to reap the gains from their differential advantages and disadvantages through trade. It may be argued that in international exchanges, in contrast to domestic exchanges, part of the gains from exchange are realized by foreigners, and that a country would be advantaged by capturing all the gains from exchange for itself. However, this raises the question of whether the domestic gains foregone by foreign trade are greater or less than the additional gains from purely domestic exchange. As a matter of simple economic theory, the gains to domestic consumers from foreign trade will almost always be greater than the additional gains to domestic producers from purely domestic trade. This is so because higher domestic than foreign prices will entail a transfer of resources from domestic consumers to domestic producers (arguably creating matching decreases and increases in welfare), but in addition some domestic consumers will be priced out of the market by the higher domestic prices and will be forced to allocate their resources to less preferred consumption choices, entailing a dead-weight social loss. An alternative way in which to conceive of the net domestic loss from foregone foreign exchange opportunities is to ask what compensation domestic producers would need to offer domestic consumers to render them indifferent to these forgone opportunities. Presumably only domestic prices that matched foreign producers' prices would achieve this end. The inability of domestic producers to make such an offer implies that foregoing foreign trading opportunities is Pareto inferior -- the gains to domestic producers and workers in the protected sectors are not sufficient to fully compensate consumers and still leave the gainers better off. As we will see in the review of the empirical evidence below, these simple theoretical propositions are amply borne out by the evidence.

International trends toward the liberalization of international trade, especially since World War II, reflect a recognition of the positive sum characteristics of broadened trading networks. The seven rounds of multilateral trade negotiations (MTN) since the inauguration of the General Agreement on Tariffs and Trade (GATT) in 1947 have substantially reduced tariffs in international trade. In Canada's case, tariffs on dutiable goods have fallen from about 24% on average at the time of World War II to about 9-10% on average today. With respect to OECD average duties, by 1980 customs duties accounted for some 2.5% of the value of imports, half the ratio ten years earlier (OECD, 1985b; p.26). In addition, some progress has been made, mostly in Tokyo Round negotiations, in disciplining the use of certain kinds of non-tariff barriers to trade (NTB's) through the negotiation of multilateral codes on anti-dumping, subsidies, government procurement, customs administration, and technical standards.

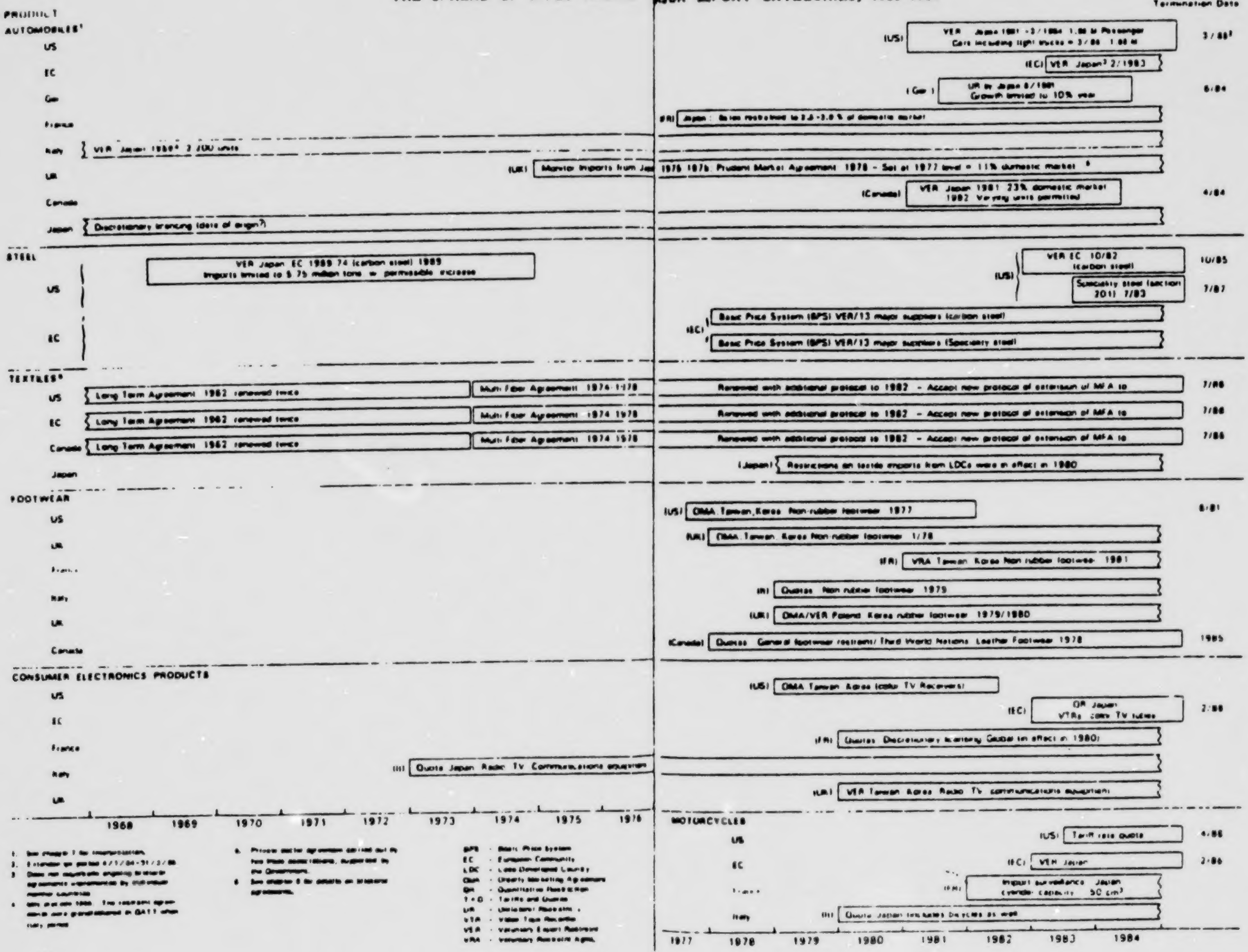
(c) The Rise of the New Protectionism

The last decade and a half -- a period when the global economy experienced two oil price shocks and two world-wide recessions - has simultaneously witnessed a sharp increase in the use of quantitative restrictions: quotas, voluntary export restraints (VER's) and orderly marketing agreements (OMA's), typically negotiated on a bilateral basis outside the safeguard provisions (Article XIX) of the GATT and in clear violation of its letter or spirit.

On one estimate, the share of restricted products in total manufactured imports increased over the period 1980 to 1983 from 6% to 13% for the U.S., and from 11% to 15% for the EEC. In 1983, the product groups subject to restriction accounted for around 30% of total manufactured consumption in the OECD countries covered, up from 20% in 1980. Within the protected sectors, it has been estimated that the absolute number of NTB's quadrupled between 1968 and 1983. While less than 1% of OECD automobile trade was affected by discriminatory restrictions in 1973, this share had risen to nearly 50% a decade later. It is also estimated that the proportion of trade under non-liberal treatment rose in recent years from 31% to 73% in steel and from 53% to 81% in textiles and clothing. From 1980 to 1983, the share of Japan's and the Asian NIC's exports affected by discriminatory restrictions rose from 15% to over 30% (OECD, 1985b; pp. 11, 12). The spread of NTB's facing major import categories is shown in the table below (ibid; pp. 32 - 33):

Table 1.8

THE SPREAD OF NTBs FACING MAJOR IMPORT CATEGORIES, 1968-1984



1. See chapter 7 for interpretation.
2. Extended for period 4/1/84-31/3/85.
3. Does not include ongoing bilateral agreements implemented by individual member countries.
4. Italy since 1959. The restraint agreements were grandfathered in GATT when Italy joined.
5. Private sector agreement carried out by two trade associations, supported by the Government.
6. See chapter 8 for details on bilateral agreements.

BPS - Basic Price System
EC - European Community
LDC - Less Developed Country
OMA - Orderly Marketing Agreement
QR - Quantitative Restriction
T+Q - Tariffs and Quotas
UR - Unilateral Restraint
VTR - Video Tape Recorder
VER - Voluntary Export Restraint
VRA - Voluntary Restraint Agmt.

In addition to the increase in the use of quantitative restrictions, various forms of contingent protection - most notably anti-dumping and countervailing duties - have been increasingly applied by governments, especially the U.S. government, against allegedly dumped or subsidized imports. Between 1980 and 1984, 123 countervailing duty actions were initiated in the U.S., six in the European Community, one in Japan and eight each in Canada and Australia (Hufbauer and Erb, 1986; p.16). In 1985, a full 5% of U.S. imports were challenged under at least one of the U.S. trade remedy laws (Rugman, 1986; p. 374). The invocation of safeguard action under Article XIX of the GATT has also increasingly taken the form of quantitative restrictions rather than tariffs as shown in the following table:

THE USE OF TARIFFS AND QUANTITATIVE RESTRICTIONS
UNDER ARTICLE XIX OF GATT[a]

Period	Tariff Measures	QRs[b]	Total	QRs as % of Total
1949-58	13	3	16	18
1959-68	20	16	36	44
1969-78	15	28	43	65
	48	47	95	50

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[a] GATT, "Note by the Secretariat--Modalities of Application of Article XIX", L/1979 (July 5, 1978); per Frank (1981), p. 17.

[b] QRs and tariffs are the only measures allowed under GATT Article XIX.

We now turn to an assessment of the cost and benefits of the "New Protectionism".

II. THE ECONOMIC COSTS AND BENEFITS OF TRADE RESTRICTIONS

This section of the chapter reviews empirical evidence on the costs and benefits of trade restrictions in the textile and clothing, footwear, steel and automobile sectors. The shipbuilding and coal mining sectors have been omitted from this discussion as assistance to these sectors has principally taken the form of subsidies rather than trade restrictions, and they will be reviewed in this context in the following chapter.

(a) The Textile and Clothing Industries

The textile and clothing industries in most countries historically have been the subject of some of the most severe trade restrictions, initially in the form of high tariffs and more recently additionally in the form of quantitative restrictions. Both industries have been attractive to newly industrializing economies because of relatively low costs of entry, relatively standardized technology, and heavy reliance on relatively unskilled labour. However, with increasingly mobile capital and technology, later entrants to the process of industrialization have been able to exploit their access to large pools of low-cost unskilled labour to secure a comparative advantage over traditional producers in these sectors. Thus, all developed industrialized economies with significant textile and clothing industries have found themselves under increasing pressure from lower-priced, foreign imports. Despite the general trend towards reduced levels of protection in international trade,at least in the first three decades since World War II, the textile and clothing industries have been increasingly heavily protected, beginning with the Short-Term Cotton Agreement in 1961 and expanding into what seems to have become a semipermanent system of bilaterally negotiated quantitative restrictions under the umbrella of the Multifibre Agreement that now applies not only to natural fibres but man-made fibres and wearing apparel. Estimates of effective levels of protection (quotas and tariffs) in these industries are shown below:

EFFECTIVE LEVELS OF PROTECTION IN THE
TEXTILE AND CLOTHING INDUSTRIES

Country	Year	Item	Total Trade Barrier(%)
Australia[a]	1979-80	Textiles	61.0
		Apparel	151.0[b]
Canada	1970[c]	Cotton fabrics	32.6[d]
	1970[e]	Synthetic Fabrics	36.3
	1970[f]	Apparel	22.6
France[g]	1981	Textiles & Apparel	32.0
Sweden[h]	1981-1982	Textiles & Apparel	47.0
U.K.	1981[i]	Textiles & Apparel	35.0
	1968[j]	Household Textiles	9.1
		Apparel	1.1
U.S.	1983[k]	Textiles	21.0
		Apparel	39.0
		Textiles & Apparel	30.0
	1983[l]	Apparel from Hong Kong	50.0
	1983[m]	Apparel	46.0-76.0
	1981[n]	Textiles & Apparel	51.0
	1976[o]	Textiles & Apparel	37.4
W.Germany	1970[p]	Textiles	25.6
		Apparel	25.1

a.Industries Assistance Commission (1980), Appendix 1.5.

b.Amount is re apparel and footwear.

c.Dauphin (1978), p. 45.

d.This amount, and (c) and (d) below, are expressed as percentages of the domestic price.

e.*Ibid.*

f.*Ibid.*, p. 46.

g.Hamilton (1984), p. 8.

h.Hamilton (1984A), p. 105.

i.Hamilton (1984), p. 8.

j.Oulton (1976), p. 80.

k.Hufbauer *et al.* (1986), pp. 146, 149.

l.Hamilton (1985), p. 21.

m.Hickok (1985), p. 6. Taking quality upgrading into account, Hickok estimates that the total induced increase in the price of imported apparel is 106%.

n.Hamilton (1984), p. 8.

o.Morici & Megna (1983), p. 99.

p.Hieminz (1976), p. 37. Amount is re imports from non-EEC countries.

Despite these high levels of protection, the textile industry in most industrialized countries has undergone a substantial transformation becoming much more concentrated and capital intensive. For example, in the U.K.,the gain in labour productivity accounted for 70% of the fall in employment in the textile and apparel sector between 1970 and 1979, although 75% of the employment decline in the apparel industry in the 1970's was attributed to international competition (two-thirds of that due to LDC import penetration) (OECD, 1985b; pp. 115, 117).

The clothing industry remains structurally unconcentrated, labour intensive, and employs large numbers of hard-to-redeploy marginal workers (such as the poorly educated, secondary earners, especially women, and members of ethnic minorities, often recent immigrants). In many industrialized countries, both industries tend to be regionally concentrated. The textile industry tends to be more heavily unionized than the clothing industry.

An important inference from differences in the evolution of the two industries is that if trade restrictions are removed, jobs will be lost to foreign suppliers as the domestic industry contracts, but if substantial contraction in output is to be avoided without trade restrictions, substantial job loss is also likely to be experienced through productivity gains from substituting capital for labour.

In terms of domestic producer gains from existing trade restrictions, Hufbauer et al offer the following estimates:

ANNUAL RENTS TO THE U.S. TEXTILES AND APPAREL INDUSTRIES DUE TO IMPORT BARRIERS

	1974 (MF I)[a]	1981 (MF II)[b]	1984 (MF III)[c]
Annual Rents to U.S. Producers	$ 8.7B	$18.0B[d]	$22.0B[e]
Annual Rents to U.S. Producers Per Extra Job	$4,000	$8,700[f]	$11,100[g]
Induced Increase in U.S. Production	2.2B lbs.	3.0B lbs.	4.0B lbs.

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a. Hufbauer *et al.* (1986), pp. 124-126.

b. *Ibid.*, pp. 135-137.

c. *Ibid.*, pp. 147-149.

d. Of which $5.4B is re textiles, and $12.6B is re apparel: *ibid.*, p. 136.

e. Of which $8.4B is re textiles, and $13.6B is re apparel: *ibid.*, p. 148.

f. For textiles and apparel combined. The 1981 gain from restraints to producers per job in textiles was $6,600, and in apparel was $8,700: *ibid.*, p. 137.

g. For textiles and apparel combined. The 1984 gain from restraints to producers per job in textiles was $11,000, and in apparel was $11,200: *ibid.*, p. 149.

Jenkins (1980) estimated that Canadian manufacturers gained $267 million in 1979 because of quotas (Jenkins, 1980).

Foreign producers also derive gains from quotas in the form of scarcity rents that are reflected in higher prices for imports than would prevail in the absence of such restrictions. The following table provides some estimates of the scale of these transfers:

ANNUAL RENTS TO FOREIGN TEXTILE AND APPAREL PRODUCERS DUE TO IMPORT QUOTAS

Country Importing Quota	Year	Item: T=Textile A=Apparel	Exporter	Annual Rents
Canada[a]	1979	T & A	All	$ 41.4M[b]
OECD[c]	1984?	T & A	All	$2,000.0M
U.S.	1984[d]	T & A	All	$1,800.0M[e]
	1984[f]	T	Hong Kong	$ 275.0M
	1981[g]	T & A	All	$ 350.0M
	1981[h]	A	All	$ 219.0M
	1980[i]	T	Hong Kong	$ 263.9M[j]
	1974[k]	T & A	All	Negligible

---

a.Jenkins (1980), p. 27.

b.Comprising 15% of total quota rents.

c.Sundkvist (1985), p. 109; where, for the sake of argument, the 15% estimate from (b) above was adopted.

d.Hufbauer *et al.* (1986), p. 148.

e.Of which $300M is re textiles and $1.5B is re apparel.

f.Tarr & Morkre (1987), p. 224.

g.Hufbauer *et al.* (1986), p. 136.

h.Hamilton (1984), p. 8.

i.Tarr & Morkre (1984), p. 14.

j.Amount is in 1983 U.S. dollars.

k.Hufbauer *et al.* (1986), p. 125.

Estimates of the employment gains and the costs per job saved from quantitative restrictions in the textile and clothing industries are set out in the following table:

DOMESTIC EMPLOYMENT GAINS IN TEXTILES AND APPAREL
DUE TO IMPORT BARRIERS*

		Number of Extra Jobs Due to Import Barriers			Annual Cost** to Consumers Per Extra Job		
Country	Year	Textiles	Apparel	Combined	Textiles	Apparel	Combined
Canada	1980[a]	--	13,474[b]	--	--	$ 34,682[c]	--
	1978	11,091[d]	2,303[e]	13,394	$63,376[f]	$233,478[g]	$92,624[h]
	1978[i]	--	--	--	$30,400[j]	--	--
EEC[k]	1980	--	11,300	--	--	$119,292	--
U.S.	1984[l]	180,000	460,000	640,000	$50,000	$ 39,000	$42,000
	1984[m]	8,800[n]	--	--	$45,100[o]	--	--
	1981[p]	150,000	390,000	540,000	$40,000	$ 36,000	$37,000
	1980[q]	1,840- 6,650	7,500- 25,590	9,340- 32,240	NA	NA	$42,240- $57,130[r]
	1980[s]	--	8,800	--	--	$156,853	--
	1978[t]	--	--	--	--	--	$81,000
	1977[u]	89,280	26,810	116,180	NA	NA	$13,200
	1977[v]	--	80,000	--	--	--	--
	1976[w]	(34,000)[x]	86,700[y]	52,700	NA	--	NA
	1974[z]	120,000	300,000	420,000	--	--	$22,000

---

*Quotas, unless otherwise noted. **Annually, unless otherwise noted.

a.Jenkins (1980), p. 39.

b.Of which Jenkins attributes 6016 to quotas and 7458 to tariffs.

c.Jenkins (1980), p. 38. This amount is the weighted average: 6016 jobs (due to quotas) at $32,859 per job, and 7458 jobs (due to tariffs) at $36,035 per job.

d.Hazeldine (1981), p. D-32. Amounts here and in (f), (g) and (h) reflect tariffs as well as quotas. Hazeldine calculates that in 1978, the number of Canadian textiles jobs attributable to import barriers was 18,062 at high-cost firms, but that there were 7,892 fewer jobs at low-cost firms than there would be in the absence of protection: *ibid.*, p. D-44.

e *Ibid.*, p. D-5.

f.*Ibid.*, pp. A-9, D-32. Hazeldine calculates a consumer gain of $106.8M in 1978 re the enhancement of product variety by some (high-cost) domestic suppliers. If this is taken into account, then in 1978 the annual cost to Canadian consumers per textiles job saved by protection was a mere $53,737.

g.*Ibid.*, pp. A-9, D-5. Hazeldine calculates a consumer gain of $3.6M in 1978 re the enhancement of product variety by some (high-cost) domestic suppliers. If this is taken into account, then in 1978 the annual cost to Canadian consumers per textiles job saved by protection was a mere $231,915.

h.Weighted average of (g) and (h). If the 1978 consumer gain calculated by Hazeldine re enhanced product variety due to some (high-cost) domestic producers is taken into account, then the 1978 weighted average annual cost to consumers per textiles & apparel job saved by trade barriers is $84,374.

i.Glenday *et al.* (1982), p. 6.

j.Amount is estimated present value of cost of protecting one Sherbrooke, P.Q., textiles jobs for 5 years beginning 1978.

k.Kalantzopoulos, per Balassa & Michopoulos (1987), p. 495.

l.Hufbauer *et al.* (1986), p. 149.

m.Tarr & Morkre (1987), p. 224.

n.Re quotas on Hong Kong, S. Korea and Taiwan.

o.Tarr and Morkre call this "a conservative estimate", since it was calculated by dividing the annual cost to U.S. consumers of textile quotas on Hong Kong ($401M) by the total number of U.S. textiles jobs attributable to textiles quotas on Hong Kong, S. Korea and Taiwan.

p.Hufbauer *et al.* (1986), p. 136.

q.Tarr & Morkre (1984), p. 117. These figures are only re tariffs on apparel.

r.*Ibid.*, pp. 117, 119. Amount is in 1983 U.S. dollars.

s.Kalantzopoulos, per Balassa & Michapoulos (1987), p. 495.

t.Council on Wage and Price Stability, p. 70; per Hufbauer *et al.* (1986B), p. 136.

u.Morkre & Tarr (1980), p. 156. Amounts are only re textile quotas.

v.Morkre & Tarr; per Sundqvist (1985), p. 117.

w.Staiger *et al.* (1987), p. 174.

x.Staiger *et al.* calculate that if the U.S. had removed tariffs and NTBs on textiles, domestic employment in 1976 would have risen by 15,900 and by 18,100, respectively.

y.Of which Staiger *et al.* attribute 18,900 to tariffs and 67,800 to NTBs.

z.Hufbauer *et al.* (1986), pp. 125-126.

Estimates of costs to consumers in the form of higher prices from trade restrictions on textile and clothing imports are shown below:

ANNUAL DOMESTIC CONSUMER LOSSES DUE TO
TEXTILE AND APPAREL IMPORT BARRIERS

Country	Year	Item: T=Textile A=Apparel	Barrier: T=Tariff Q=Quotas	Annual Cost to Consumers
Australia	1977-78[a]	T	T & Q	$ 334M[b]
		A	T & Q	$ 760M[c]
Canada	1978[d]	T	T & Q	$ 703M
		A	T & Q	$ 538M
	1978[e]	A	T & Q	$ 500M
	1979[f]	A	T & Q	$ 467M
Sweden	1981[g]	T & A	T & Q	SKR 3,000M
		T & A	Q	SKR 2,000M
U.S.	1984[h]	T & A	T & Q	$27,000M[i]
	1984[j]	A	T & Q	$ 8,500M- $12,000M
	1984[k]	T	Q[l]	$ 401M
	1981[m]	T & A	T & Q	$20,000M[n]
	1980[o]	T & A	T	$15,000M
			Q	$ 3,400M[p]
	1980[q]	T	Q	$ 384M- $ 508M
	1980[r]	T	Q[s]	$ 308M
	1978[t]	A	T	$ 2,700M
	1977[u]	A	T & Q	$ 900M
	1977[v]	A	T	$ 406M
		T	T	$ 13M
	1974[w]	T & A	T & Q	$ 9,400M
	1972[x]	T[y]	Q	$ 2,500M
	1970[z]	T[aa]	Q	$ 600M

---

a.Glezer (1982), p. 297.

b.Australian dollars.

c.Australian dollars.

d.Hazeldine (1981), p. A-8. Hazeldine calculates, however, that if protection on textiles had been removed, Canadian consumers would have suffered a loss in 1978 of $106.9M re reduction in product variety due to the closing of some (high-cost) domestic suppliers. If this is taken into account, then the net annual cost of textile protection to Canadian consumers was $596.0M in 1978.

e.Glenday (1982), p. 1.

f.Jenkins (1980), p. 33. Of this amount, $198.3M is re quotas and $269.1M is re tariffs.

g.Hamilton (1984).

h.Hufbauer _et al._ (1986), p. 148.

i.Of which $9B was re textiles, and $18B was re apparel.

j.Hickok (1985), p. 6.

k.Tarr & Morkre (1987), p. 224.

l.Re Hong Kong only.

m.Hufbauer _et al._ (1986), p. 136

n.Of which $6B was re textiles, and $14B was re apparel.

o.Munger (1983), per Widenbaum & Munger (1983), p. 15.

p.Weidenbaum and Munger contend that the actual amount is probably...many times larger" than that stated here: _ibid._, p. 17.

q.Tarr & Morkre (1984), p. 119.

r.Morkre (1984), p. 28.

s.Re Hong Kong only.

t.Council on Wage and Price Stability (1978), p. 70.

u.Guzzardi (1983), p. 86.

v.Morkre & Tarr (1980), p. 156.

w.Hufbauer _et al._ (1986), p. 125.

x.Mintz (1973), p. 59.

y.Cotton, woolen, and man-made textiles.

z.Mintz (1973), p. 59.

aa.Cotton textiles.

To render these costs more concrete, Hufbauer et al calculate that under MFA III, the net loss per job saved in the U.S. textile industry was $39,000 (a $50,000 gross loss, less an $11,000 gain to producers by avoiding the costs of adjustment). The resulting increase in the price of imports was calculated at 30% overall (21% for textile; 39% for clothing). Domestic goods increased in price by 24%, representing a 17% increase in the price of textiles and a 31% increase in the price of clothing (Hufbauer et al, 1986; p. 149). Wolf expresses the disproportionality between the costs and benefits of trade restrictions in the textile and clothing sectors even more starkly by extrapolating as follows from findings of Jenkins on the effects of quotas in these sectors in Canada and actual post job lay-off employment experience:

> On a present value basis the economic cost of the quotas, if maintained forever, (with a 3% growth of the market and a 7 % discount rate) would be about Canadian $360,000 per man-year of employment preserved. For tariffs the corresponding figure would be Canadian $70,000. At the same time the highest private cost of job loss would have a present value of less than Canadian $5,000 after government transfers. Thus given the government's other benefits, a social cost of Canadian $360,000 would be borne, if the bilateral restrictions were maintained indefinitely, in order to save workers who would otherwise lose their jobs from a private loss of at most Canadian $5,000 each. In other words, for every cent that a worker who would otherwise lose his job is better off, society as a whole is 72 cents worse off as a result of a permanent policy of quantitative restrictions (Wolf, 1983; p. 477).

In review, trade restrictions in the textile and clothing sectors have not prevented substantial job loss in these sectors. In 1953, the textile and clothing sectors accounted for over 20% of OECD manufacturing employment. By 1980, their share was around 13%. Over the period 1973-1982, employment levels declined at an annual average rate of 4.5% for textiles and 3% clothing (OECD, 1985b; p. 112). The relatively limited impact of trade restrictions on employment is explained by trade diversion caused by quantitative restrictions - Japan moving out of cotton textiles into synthetics, other less restricted NIC's such as Hong Kong and Taiwan increasing their levels of exports; and, additionally, in the textile industry, increasing substitution of capital for labour. Estimates suggest that no more than 8% of the industry's 1976 labour force depended on tariffs for their job. In Sweden, estimates suggest that increasing the level of textile imports under voluntary restraint by 50% would displace about 3% of the industry's employment (OECD, 1985b; p. 117).

While job preservation from trade restrictions in the clothing industry has been much more substantial than in the textile industry, because of greater labour intensity, often internal trade diversion has occurred, e.g., from the north-east to the south of the U.S, so that trade restrictions have not protected established patterns of employment. Jobs preserved in both textile and clothing sectors have entailed costs to consumers well in excess of gains to producers, many of which gains have accrued to foreign exporters. To the extent that trade restrictions have provided "breathing space" for structural adjustments, German, Swiss and Italian manufacturers have concentrated on product differentiation strategies which seek to identify higher value - added, higher quality segments of the market. Japanese manufacturers have pursued similar strategies, and have also entered into joint ventures with manufacturers in low-wage developing countries. The U.S. textile industry, with access to a large domestic market, has sought to realize economies of scale through greater concentration and capital intensity, as well as cutting costs by locating new plants in non-unionized, lower-wage regions of the country. Britain and France have promoted greater industrial concentration and integration in textiles, but economies of scale realized from mass production appear to have been insufficient to offset cost and hence price disadvantages vis-a-vis other producers. Attempting to compete primarily over price appears not to have been an optimal strategy.

(b) Footwear

Due to the nature of the product, footwear tends often to be manufactured in small, specialized plants. Barriers to entry are low, technology relatively standardized, and production relatively labour intensive. The industry's workforce is largely lower skilled, low paid and female, with low levels of unionization. In most countries the footwear industry is regionally concentrated.

All industrialized countries with footwear industries have faced increasing competition from newly industrialized countries, particularly with respect to low-cost rubber, canvas, vinyl and plastic footwear, but also more recently with respect to higher priced, higher quality footwear from countries such as Brazil.

As with textiles and clothing, a common response to foreign inroads into domestic markets in many industrialized countries has been the adoption of trade restrictions, typically a combination of tariffs and quantitative restrictions in the form of global quotas (Canada, Australia) or bilaterally negotiated OMA's or VER's (U.S., U.K., France, Italy).

Estimates of the effective levels of protection on footwear imports into various industrialized countries are shown below:

EFFECTIVE LEVELS OF PROTECTION IN THE FOOTWEAR INDUSTRY

Country	Year	Type of Footwear	Total Trade Barrier (%)
Australia[a]	1978/79	All	151.0
Canada	1978[b]	All	29.0
	1970[c]	Rubber & Plastic	17.8
		Leather	19.2
U.K.[d]	1982	Non-Leather	33.0[e]
U.S.	1983[f]	Rubber	42.0
	1981[g]	Non-Rubber	18.5
W. Germany[h]	1970	All	15.1

---

a. Industries Assistance Commission (1980), Appendix 1.5. Amount is re footwear and apparel.

b. Hazeldine (1981), p. A-3.

c. Dauphin (1978), p. 45. Rates are expressed as percentages of the domestic prices.

d. Greenaway (1986), pp. 1072, 1073.

e. Calculated as 13.0% re VERs plus 20.0% nominal tariff. Greenaway realizes [*ibid.*, p. 1070] that the effective tariff exceeds the nominal tariff of 20.0%, but he does not estimate the extent to which it does so.

f. Hufbauer *et al.* (1986), p. 78.

g. *Ibid.*, p. 214.

h. Hieminz & Rabeneau (1976), p. 37.

Estimates of gains to domestic footwear producers as a result of import restraints are shown below:

ANNUAL RENTS TO DOMESTIC FOOTWEAR PRODUCERS
DUE TO IMPORT BARRIERS

Country	Year	Type of Footwear	Annual Rents to Domestic Producers
Australia[a]	1977-78	All	$ 129.0M
Canada[b]	1978	All	$ 35.6M
U.K.[c]	1982	Non-Leather	49.8M
U.S.	1983[d]	Rubber	$ 90.0M
	1981[e]	Non-rubber	$ 250.0M

---

[a] Glezer (1982), p.297. Amount is in Australian dollars.

[b] Hazeldine (1981), p. D-28.

[c] Greenaway (1986), p. 1077.

[d] Hufbauer _et al._ (1986), p. 76.

[e] _Ibid._, p. 215.

Quantitative restrictions on footwear imports, as with textiles and clothing, have conferred substantial scarcity rents on foreign producers. Estimates of rents accruing to foreign footwear producers are shown below:

ANNUAL RENTS TO FOREIGN FOOTWEAR PRODUCERS
DUE TO IMPORT BARRIERS

Country Imposing Barrier	Year	Country Benefitting	Type of Footwear Affected	Annual Rents
U.K.	1982[a]	Taiwan, S. Korea	Non-Leather	£ 7.5M
	1982[b]	Unrestrained Suppliers	Non-Leather	£ 22.4M
	1982[c]	All Other Suppliers	Non-Leather	£ 9.7M
U.S.	1983[d]	All	Rubber	Negligible
	1981[e]	Taiwan, S. Korea	Non-Rubber	$220.0M
	1980-1981[g]	Taiwan	Non-Rubber	$180.1M[f]

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a. Greenaway (1986), p. 1077.

b. *Ibid.*

c. *Ibid.*

d. Hufbauer *et al.* (1986), p. 76.

e. *Ibid.*, p. 215.

f. Morkre & Tarr (1980), various pp.

g. Of which $180.1M is re plastic footwear [*ibid.*, p. 129]; $21.4M is re leather [*ibid.*, p. 118]; and $17.9M is re other [*ibid.*, p. 130].

Estimates of domestic employment gains from import restrictions and costs per job saved are shown below:

DOMESTIC EMPLOYMENT GAINS DUE TO FOOTWEAR IMPORT BARRIERS

Country	Year	Type of Footwear	Extra Jobs Due to Trade Barriers	Annual Cost to Consumers Per Extra Job
Canada[a]	1978	All	1,733	$58,223
U.K.[b]	1982	Non-Leather	7,500	£ 6,000- £13,000
U.S.	1983[c]	Rubber	7,800	$30,000
	1981[d]	Non-Rubber	12,700	$55,000
	1980- 1981[f]	Non-Rubber	5,536	$28,215[e]
	1980[g]	Non-Rubber	3,132	$21,967
	1980[h]	All	--	$77,714
	1977-79 (Ave.)[i]	Non-Rubber	15,100	--
	1977[j]	Non-Rubber	10,240[k]	--
	1976[l]	All	17,000[m]	--
	1973[n]	All	7,781[o]	--

---

a. Hazeldine (1981), pp. D-28, D-29.

b. Greenaway (1986), p. 1077. Of these jobs, Greenaway attributes 3800 to tariffs and 3700 to VERs. Estimated adjustment costs to labour on removal of the trade barriers is 78.1M.

c. Hufbauer _et al._ (1986), p. 77.

d. _Ibid._, p. 215

e. Morkre & Tarr (1980), pp. 123, 124, 125.

f. _Ibid._, pp. 123, 124. Amounts are re OMAs with Taiwan and S. Korea.

g. Pearson (1983), p. 51; per Hufbauer _et al._ (1986), p. 215.

h. Weidenbaum & Munger (1983), p. 17.

i. USITC (1982), p. 25. This amount includes induced changes in related industries--e.g. leather tanning, plastics, textiles.

j. Morkre & Tarr (1980), p. 111. Amount is re OMAs with Taiwan and S. Korea.

k. Amount is re tariffs only.

l. Staiger _et al._ (1987), p. 174.

m. Of which Staiger _et al._ attribute 1,300 to tariffs and 15,700 to NTBs.

n. Szenberg _et al._ (1977). The present value of estimated adjustment costs to labour over 13 years (starting 1973), upon reduction of the U.S. tariff on non-rubber footwear by 10 percentage points, discounted at 4%, is $83.5M: _ibid._, p. 87.

o. Jobs which would have been lost in 1973, according to Szenberg _et al._, if the U.S. tariff on non-rubber footwear had been reduced by 10 percentage points: _ibid_. p. 89.

Estimates of domestic consumer losses due to import restrictions in the footwear industry are shown below:

DOMESTIC CONSUMER LOSSES DUE TO
FOOTWEAR IMPORT BARRIERS

Country	Year	Type of Footwear	Annual Cost to Consumers
Canada[a]	1978	All	$ 100.8M
U.K.[b]	1982	Non-Leather	£ 117.5M
U.S.	1983[c]	Rubber	$ 230.0M
	1981[d]	Non-Rubber	$ 700.0M
	1980-81[e]	Non-Rubber	$ 156.2M[f]
	1980[g]	Non-Rubber	$1,400.0M
	1977-78 Ave.[h]	Non-Rubber	$ 500.0M

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a.Hazeldine (1981), p. D-28.

b.Greenaway (1986), p. 1077.

c.Hufbauer *et al.* (1986), p. 76.

d.*Ibid.*, p. 215.

e.Morkre & Tarr (1980), p. 125.

f.Amount is re OMAs with Taiwan and S. Korea.

g.Munger (1983), p. 9; per Hufbauer *et al.* (1986), p. 215. Reflects tariffs but not OMAs.

h.Cline (1984), p. 42; per Hufbauer *et al.* (1986), p. 215. Reflects OMAs but not tariffs.

In more concrete terms, Hufbauer et al estimate that U.S. trade restrictions on imported rubber footwear have induced a 21% increase in domestic prices and a 42% increase in the price of imported rubber footwear (Hufbauer et al, 1986; p. 76). In the case of non-rubber footwear, restrictions have induced a 5.5% in domestic prices and an 18.5% increase in the price of imports (ibid.). Weidenbaum and Munger suggest that footwear quotas and tariffs cost U.S. consumers $77,714 per job, yielding a ratio of costs to wage compensation of 9.3:1 (average wage compensation at the time of the estimate was $8,340 p.a.) (Weidenbaum and Munger, 1983; pp. 14-18).

Despite high tariffs and quantitative restrictions, the footwear industry in most industrialized countries has continued to contract. In the U.S., between 1968 and 1976, output fell 36%, employment 34%, and the number of plants 33% (Trebilcock, 1986; p. 156). In Canada, the domestic market share of Canadian footwear producers dropped from 59% in 1968 to 42% in 1980. Employment has fallen by one-third since 1965 and the number of plants by 23% (ibid.; pp. 77, 92). In Australia, from 1970 to 1980, total number of establishments contracted by 30% and total industry employment fell about 36% (ibid.; pp. 213-215).

As with textiles and clothing, quantitative restrictions have had limited effects on industry output and employment, because of trade diversion effects with restricted suppliers moving up to higher value-added product lines, and unrestricted suppliers increasing their exports.

In 1981, the U.S. Administration dismantled the OMA's on footwear and in December 1985, the Canadian government, following recommendations of the Canadian Import Tribunal, (Canadian Import Tribunal, 1985) lifted its quota. The Tribunal in its report cited research undertaken for it by The Institute for Research and Public Policy that found that quotas increased employment by only 2.1 to 4.4% - about 350 to 700 jobs. Output effects were also minimal. Quotas were found to have increased production by $3.5m in 1982 and at most $7.9 m. in 1983. Quotas resulted in increased costs to consumers of $40m in 1980 and $85m in 1983. The bulk of the gains from the quotas were realized by importers holding quotas (41%), followed by manufacturers (34%), and large retailers holding quotas (26%). The Tribunal found that significant rationalization and restructuring had occurred within the industry but attributed this to competitive pressures from imports, and not, for the most part, to any "breathing space" effects of the quotas.

(c) The Steel Industry

The steel industry in many industrialized countries has faced increased import competition from newly industrializing countries, such as Japan, and more recently from countries such as Taiwan, South Africa, Australia, Canada, Argentina, Brazil, Mexico and Venezuela. A global decline in the demand for steel as a result of increasing use of lighter substitutes; technologically obsolete plants; the development of specialized mini-mills; and a high wage structure reflecting in part high degrees of unionization in the sector; have all contributed to a loss of competitiveness. The structurally and regionally concentrated nature of the industry and the substantial organized work-force involved have often led to demands for trade restrictions.

In addition to tariffs, the U.S. has employed VER's with Japan and the European Coal and Steel Community (1968-1975), a trigger price mechanism (TPM) introduced in 1977, that sets price floors for imports, which if violated trigger fast-track anti-dumping proceedings, and beginning in 1982, following further import surges, the U.S. government negotiated VER's with the European Community, Japan, Korea, Spain, Brazil, Mexico, South Africa, and Australia. By the end of 1985, a total of 15 VER's had been negotiated covering 80% of the U.S. market (Hufbauer, et al, 1986; p. 173).

European steel producers, as members of the European Coal and Steel Community, since 1978 have adopted minimum price floors and maximum production quotas. In addition to a common effective external tariff of approximately 12% and minimum import prices, beginning in 1978 VER's have also been negotiated with a number of countries, most notably Japan.

Most empirical studies that have been undertaken of the effects of trade restrictions on the steel industry relate to the U.S. and hence principally findings from these studies are reported below.

Hufbauer et al report findings by reference to three different phases of U.S. trade policy with respect to steel: (1) 1969-76 (VER's); (2) 1978-82 (TPM); and (3) 1982 to present (VER's) (ibid.; pp. 154-186).

For the first period, they report gains to U.S. producers for 1974 of $1,330m; gains from restraints to foreign suppliers ranging from $175m to $330m per year; induced increases in employment from 8,100 - 19,117; costs of restraints to consumers ranging from $1,254m to $1,970m per year; induced increases in prices of imported steel (1974) ranging from 6.3% to 13.3%; induced increases in prices of domestic steel of 3.8% to 5.3%; costs of restraints to U.S. consumers per job saved ranging from $63,000 to $240,000; and gains to U.S. producers per job (1974) of $3,400.

In the second phase, Hufbauer et al report the following findings: gains from restraints to U.S. producers ranging from $640m (1979) to $2,770m

(1981); gains from restraints to foreign producers ranging from $519m (1979) to $930m (1981); induced increases in employment in the U.S. steel industry ranging from 7,000 (1981) to 12,400 (1979); costs of restraints to U.S. consumers ranging from $1,135m (1980) to $4,350m (1981); induced increases in prices of imported steel ranging from 10.3% to 15.9%; induced increases in prices of domestic steel ranging from 0.8 to 6.4%; costs of restraints to U.S. consumers per job saved ranging from $110,000 to $620,000; gains from restraints to U.S. producers per job of $9,700.

In the third phase, the authors report the following findings: gains from restraints to U.S. producers ranging from $428m to $3.4b per year; gains from restraints to foreign producers ranging from $557m to $2b per year; induced increases in employment ranging from 9,000 to 11,250; cost of restraints to U.S. consumers ranging from $1.1b p.a. to $6.8b. p.a.; induced increases in prices of imported steel of 30%; induced increases in prices of domestic steel of 12%; costs of restraints to U.S. consumers per job saved ranging from $113,622 to $750,000; gains from restraints to U.S. producers per job of $22,000.

The authors also report findings on the effects of safeguard relief for 1976-1986 in the U.S. specialty steel industry. Two figures stand out starkly: the cost of restraints to U.S. consumers per job saved (in total 500 jobs) was $1m (1984); the gain from restraints to U.S. producers per job (1984) was $60,000.

Despite the extensive and (for consumers) expensive protection of the U.S. steel industry, employment in the industry has fallen from 420,684 in 1968 to 171,000 in 1984. Imports as of 1984 held 26.7% of the U.S. steel market (up from 16.7% in 1968) (ibid.). Together with the emergence of specialized, domestic mini-mills with highly efficient capital-intensive production technology, the large integrated U.S. steel producers face continuing loss of competitiveness.

The experience of member countries of the EEC has been similar, with total EEC steel employment falling from 800,00 in 1974 to about 450,000 in 1984 (OECD, 1985b; p. 53). Employment in the U.K. steel industry fell from 208,000 in 1977 to 100,000 in 1982; crude steel production fell from 27.9 million tons in 1970 to 11.4 million tons in 1980 (Trebilcock, 1986; p. 180). Employment in the French steel industry fell from 157,000 in 1975 to 97,000 in 1982. Production has declined from 27 million tons in 1974 to 18.4 million tons in 1982 (*ibid.*; p. 257). Employment in the West German steel industry fell from 250,000 in 1974 to 180,000 in 1982, while crude steel production fell by almost 50% between 1974 and 1980 (*ibid.*; p. 286).

There is little evidence, either from the U.S. or European experiences, that trade restrictions are able to provide effective "breathing spaces" for industries facing import competition to recover their competitiveness and preserve output and employment. Such attenuating effects that these restrictions have on the rate of contraction are small and come at highly disproportionate costs to consumers.

(d) Automobiles

From the beginning of the 1970's, North America and to a lesser extent European automobile industries have faced a dramatic increase in competitive inroads from Japanese auto producers. For example, in 1982, 27.3% of automobile sales in the U.S. were imports, up from 18% in 1977; 22.4% of all sales were accounted for by Japanese imports, up from 12.7% in 1977 (OECD, 1985b; p. 137). In 1982, imports accounted for 31.4% of automobile sales in Canada; 25% of all sales were Japanese imports, up 13.6% from 1977 (Economic Council of Canada, 1987; Table 7 - 5). The emergence of Japan as a low-cost, high quality mass producer of small cars, together with the oil price shocks of the 1970's, provided a major impetus to imports. The landed cost advantage of a Japanese auto over a North American built small car was estimated in the early 1970's as between $1,500 and $2,100 - up to 40% per car (ibid.; pp. 7-22). In addition, significant quality differences began to emerge between Japanese imports and domestically built cars (Crandall, 1984). The appreciation of the U.S. dollar against the yen reinforced underlying cost and quality differences.

In 1981, the U.S. negotiated a three year VER with Japan. A similar agreement was negotiated between Canada and Japan. The U.K., France and Italy had previously negotiated tight, informal market share agreements with Japan, dating from the mid 1970's. Similar understandings were subsequently reached between Japan and West Germany and Belgium (OECD, 1985b; p. 136). In April 1985, the formal VER between the U.S. and Japan expired and was not renewed, although Japan announced it would hold exports to 2.3m units for 1985. Australia has for many years imposed stringent local content requirements, an extremely high tariff (57.5% in 1979), and quota requirements designed to preserve 80% of sales for local producers (Trebilcock, 1986; p. 212). For 1981, the Australian Industries Assistance Commission estimated the tariff equivalent of these policies with respect to the Australian passenger vehicle industry at 70-85% (OECD, 1985b; p. 138).

Estimates of domestic producer gains from trade restrictions in the automobile industry are shown below:

GAINS TO DOMESTIC AUTOMOBILE MANUFACTURERS DUE TO PROTECTION FROM IMPORTS

Country	Year	Annual Gain to Domestic Producers
Australia	1977-78[a]	$ 805M
Canada	1985[b]	$ 200M- $1,000M[c]
	1985[d]	$ 570M[e]
U.S.	1983[f]	$ 890M- $1,420M
	1984[g]	$ 120M
	1984[h]	$2,600M
	1983[i]	$ 115M

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a.Glezer (1982), p. 297.

b.Hazeldine & Wigington (1985).

c.Includes gains to foreign producers.

d.Coopers & Lybrand (1986).

e.Includes gains to foreign producers.

f.Crandall (1984), p. 14.

g.Tarr & Morkre (1987), p. 220. Amount is re VRA with Japan.

h.Hufbauer *et al.* (1986B), p. 257.

i.Tarr & Morkre (1984), p. 56.

Estimates of gains from scarcity rents to Japanese producers from trade restrictions are shown below:

ANNUAL RENTS TO JAPANESE AUTOMOBILE PRODUCERS
DUE TO BARRIERS TO U.S. MARKET

Estimator	Year	Annual Rents
Hufbauer *et al.*[a]	1984	$2,200M
Tarr & Morkre[b]	1984	$ 860M
Tarr & Morkre[c]	1983	$ 824M
Crandall[d]	1983	$2,000M

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a.(1986), p. 258.

b.(1987), p. 220.

c.(1984), p. 56.

d.(1984), p. 13.

Estimates of jobs saved from recent VER's in the auto industry are shown below:

DOMESTIC EMPLOYMENT GAINS DUE TO AUTOMOBILE IMPORT BARRIERS

Country	Year	Extra Jobs Due to Trade Barriers
Canada	1985[a]	-1,577 to 879
	1982-1985[b]	3,180
U.S.	1984[c]	55,000
	1984[d]	45,000
	1984[e]	44,100
	1984[f]	4,600
	1983[g]	26,200
	1983[h]	4,600
	1980-1981[i]	5,600 to 11,100

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a.Hazeldine & Wigington (1985).

b.Coopers & Lybrand (1986).

c.Hufbauer *et al.* (1986B), p. 258.

d.Balassa & Michalopoulus (1987), p. 485.

e.USITC (1985), p. 41.

f.Tarr & Morkre (1987), pp. 220, 221.

g.Crandall (1984), p. 16. Crandall calculates that the maximum possible number was 46,200: *ibid.*

h.Tarr & Morkre (1984), p.70.

i.Feenstra (1984), p. 54; per Hufbauer *et al.* (1986B), p. 258. Assumes import demand elasticity of 2-3.

Estimates of costs of recent VER's to consumers are shown below:

ANNUAL DOMESTIC CONSUMER LOSSES DUE TO AUTOMOBILE IMPORT BARRIERS

Country	Year	Annual Cost to Consumers
Australia	1977/78[a]	$1,170M
Canada	1985[b]	$ 570M
	1985[c]	$ 200M- $1,000M
U.S.	1984[d]	$8,520M
	1984[e]	$5,800M
	1984?[f]	$5,000M
	1984[g]	$4,500M
	1984[h]	$2,007M[i]
	1984[j]	$1,157M[k]
	1983[l]	$4,680M
	1983[m]	$4,300M[n]
	1983[o]	$1,109M
	1981-84 Ave.[p]	$3,920M

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a. Glezer (1982), p. 297. Amount is in Australian dollars.

b. Coopers & Lybrand (1986).

c. Hazledin & Wigington (1986).

d. USTIC (1985), p. ix.

e. Hufbauer *et al.* (1986), p. 257.

f. Aho (1985), p. 249.

g. Hickok (1985), p. 8.

h. Kalantzopoulos, per Balassa & Michalopoulos (1987), p. 495.

i. Amount is re VERs only.

j. Tarr & Morkre (1987), p. 220.

k. Or $251,6000 per year per extra job: *ibid.*, p. 221.

l. USTIC (1985), p. ix.

m. Crandall (1984), p. 16.

n. This amount does not include additional losses in consumer welfare arising from VERs' constraint on choice of cars.

o. Tarr & Morkre (1984), p. 56. This is $241,235 per year per extra job: *ibid.*

p. USTIC (1985), p. ix.

Estimates of induced increases in the price of imported autos as a result of the VER's in the U.S. range from 2.4% to 15.3% (or $1,000 per auto) (Hufbauer _et al_, 1986; p. 256). In Canada, one estimate finds that the VER with Japan increased the cost of Japanese imports by an average of $1,280 per vehicle in 1985 (Cooper's and Lybrand, 1986). Estimates of induced increases in the price of domestic U.S. autos as a result of the VER with Japan range from 4% to 5% (or about $400 per vehicle) (Hufbauer _et al_, 1986; p. 257). In Canada, one estimate finds that the price of small domestic and European cars increased on average $650 per vehicle in 1985 as a result of the VER (Cooper's and Lybrand, 1986).

Estimates of the annual cost of restraints to U.S. consumers per job saved range from $105,000 to $241,235 (Hufbauer _et al_, 1986; p. 258). In Canada, estimates range from $179,000 (Cooper's and Lybrand, 1986) to $207,166 (Hazledine and Wigington, 1985) per job saved in 1985. Gains from restraints to U.S. producers per job (1984) have been estimated at $4,300 (Hufbauer _et al_, 1986; p. 258).

Summarizing the effects of recent VER's on automobile production, as the OECD notes, "the impact of trade restrictions on domestic output has been small relative to that of changes in macroeconomic circumstances" (OECD, 1985b, p.136). Soras and Stodden estimate that U.S. auto sales in 1982 were 4.3 million units below what past trends would have suggested they should have been, largely because of compressed incomes and rising real interest rates in the depths of the recession. The 100,000 unit increase induced by the VER's with Japan in 1982 was a very small offset to this shortfall. Feenstra estimates that induced employment increases from the U.S. - Japan VER over the period to 1982 was no more than 22,000, while the recession was cutting required labour inputs by more than ten times this figure (OECD, 1985b; p. 141). The appreciation of the U.S. (and Canadian) dollar against the yen was a further adverse feature of the macroeconomic environment. However, the substantial recent appreciation of the yen has significantly reduced Japan's cost advantages.

Two other factors have reduced the impact of VER's on employment in the automobile industry. First, Hunker has estimated that between 1980 and 1985 the share of small luxury cars in Japanese exports to the U.S. would have run from 40% to 55% even in the absence of the VER but in its presence rose to 63% (Hunker, 1984). In other words, Japanese manufacturers moved up market to higher value-added units. Second, given that the VER only related to Japan, substantial trade diversion incentives were created. In the case of Canada, Hyundai of South Korea, which exported fewer than 100 cars to Canada in 1983, in 1985 exported 79,072 cars (almost 24% of all imports) (Economic Council of Canada, 1987; pp. 7-25).

Denzou claims that the cartelization effects of VER's on Japanese automobile exports have significantly benefitted Japan's major producers. The Japanese trade ministry (MITI) in establishing firm-specific quotas for exports under the VER's prevented effective price competition among Japanese auto-makers, enabling them to raise prices and increase their profits. (Denzou, 1988; p. 12) Indeed, upon announcement of the 1981 U.S.-Japan auto VER there were substantial net-of-market increases in the stock prices of the major Japanese auto manufacturers ranging from 6.1% for Mazda to 14% for Nissan. Moreover, stock prices seemed to permanently settle at the new higher level. (Denzou, 1988; p. 13) This indicates that the major Japanese manufacturers actually realize a net benefit from the VER's, the profits from cartelization more than compensating for the restriction on the number of units exportable.

The period of VER's in the North American auto industry has witnessed significant improvements in productivity with plant rationalization, technological innovation, product quality improvements, and improved industrial relations. As well, outsourcing to multinational subsidiaries and to foreign manufacturers of component and sub-assembly production and in some cases whole units through contractual or joint venture arrangements, and the development of new local production facilities by foreign producers or through joint venture arrangements with domestic producers reflect major structural changes in the industry (often referred to, not uncritically, as "co-operative protectionism").

(e) Summary

The recent employment of discriminatory quantitative trade restrictions (the so-called "New Protectionism") by industrialized countries to protect sectors under competitive pressure from imports yields a very negative economic assessment, even if viewed solely from the perspective of the domestic economies of countries invoking such policies. Their policies have had relatively marginal effects on the preservation of employment and maintenance of output in the sectors reviewed, and such effects have been induced at wholly disproportionate costs to domestic consumers. Often, major beneficiaries have been foreign producers, who are able to capture scarcity rents from quota-induced shortages.

The weak employment effects of these policies are explained by various substitution effects that they induce, both suggested by theory (see Chapter

I) and confirmed by the empirical evidence reviewed in this chapter. These effects can be summarized as follows:

(a) VER's that restrict the number of units of imports in a given sector create incentives for foreign producers to move up-market to higher value-added, more profitable export lines. This has the perverse effect of leaving the domestic industry with a share of the product market where its comparative disadvantage is greatest and induces greater import competition in product markets where its comparative disadvantage is smallest. This trend has been evident in textiles, footwear and automobiles. It can only be countered by ever more detailed import restrictions.

(b) VER's induce entry into the market by unrestricted third country suppliers ("trade diversion"). This trend has been evident in textiles and clothing, steel, and automobiles, and can only be countered by ever broader territorial coverage of these restrictions. In some cases, such as Japanese autos, the cartelization effects of VER's (i.e. reduction/price competition) may actually place the foreign producers who participate in the VER-induced cartel in a better position than under conditions of unrestricted trade (Denzau, 1988). This evokes an extremely significant transfer of wealth from domestic consumers (who must pay the higher cartel-induced prices) to foreign producers -- a transfer which seems redistributively perverse from any of the ethical perspectives considered in Chapter I.

(c) Quantitative restrictions that initially generate supra normal profits for local producers are also likely to generate new domestic entry that may quickly compete away these profits (depending on the elasticity of supply). Thus, rationales for trade restrictions that turn on "breathing spaces" with enhanced profitability to finance restructuring will often prove unsound. This is particularly so in industries with low entry barriers like footwear and clothing. For example, in the U.S. one third of the clothing and textile establishments existing at the end of 1982 had been created since 1976. In France, over a fifth of new manufacturing firms are in the textile and clothing industries (OECD, 1985b; p. 172). This consideration is less true of the automobile and steel industries where large specialized up-front investments discourage "hit and run" entry. In the auto industry, VER's in North America may have contributed to record industry profits in the last several years (although recovery from the recession has obviously been a much more important factor), and these profits may have facilitated the restructuring and productivity improvements being realized by the industry. In the U.S. steel industry, the established integrated steel firms have invested very few resources in productivity improvements and appear to be diversifying out of steel into unrelated sectors.

(d) Productivity improvements in domestic industries induced by continuing competitive pressures from domestic and foreign rivals will, even if they maintain industry output, almost certainly involve job loss as capital is substituted for labour through technological innovation and improved production techniques. This trend has been particularly evident in the textile and automobile industries and aspects of the steel industry.

(e) Even where trade restrictions help preserve domestic employment, internal "trade diversion" may occur as industries relocate to lower-wage regions of the country. This has been particularly evident in the U.S. textile, clothing and steel industres. While new jobs are created in the low-cost regions, jobs are sacrificed in the higher-cost regions. Similar internal job substitution effects are likely to be induced by foreign producers seeking to circumvent trade restrictions by investing in new local production facilities (as in the North American auto industry).

(f) Outsourcing by domestic producers of component and sub-assembly manufacture to multinational subsidiaries or foreign producers, where this circumvents trade restrictions on fully assembled imports, again induces domestic job loss.

Two general effects of discriminatory quantitative restrictions should finally be noted. First, a ratchet effect is set in train as restrictions need to be deepened to prevent up-market substitution by restrained suppliers and broadened to prevent substitution by unrestrained third country suppliers. Also, other importing countries, concerned that restrained products will be diverted to (or "dumped" in) their markets, will feel impelled to adopt similar restrictions (e.g., the EEC VER response to the U.S. Trigger Price Mechanism in steel). This ratchet effect may be very difficult to reverse. Second, discriminatory quantitative restrictions promote what has been called "co-operative protectionism" where foreign producers are partly co-opted by scarcity rents from quantitative restrictions, by various contractual and joint venture arrangements for outsourcing, and by foreign investment in local production facilities, all of which give them an increasing stake in prevailing trade restrictions. However, this is a perversion of traditional concepts of international trade or competition and while inherently raising costs over the free trade base case, also entails significant risks over time of anti-consumer collusive or non-competitive behaviour.

With so little to be said for the "New Protectionism" from an economic perspective, we must now turn our attention to the nature of domestic political processes that generate such policies.

III. THE POLITICAL DEMAND AND SUPPLY FUNCTIONS FOR TRADE RESTRICTIONS

(a) Public Choice Models of the Trade Policy Process

The previous section of this chapter has shown that empirical research, with striking consistency, has found that in every industry reviewed the aggregate costs to consumers of trade restrictions vastly exceed the aggregate gains to domestic producers. The strength of these findings confronts the analyst and policy reformer with the challenge of explaining why domestic policy-making processes generate policies seemingly so sharply at variance with overall community welfare. Understanding, as a matter of positive analysis, the political impulses at play in this context is a necessary prelude to the formulation of normative prescriptions for reform of either substantive policies or policy-making processes. It would be futile to propose reforms to substantive policies if these proposals simply assume away the policy-making processes that have generated current policies. It would be equally futile to propose reforms to existing policy-making processes without having first identified with clarity and confidence the sources of dysfunctions or biases in those processes, measured against the normative economic and ethical perspectives outlined in chapter I, and to which proposed institutional reforms purport to be responsive.

Over the last two decades or so, economists have developed an increasing interest in the positive analysis of politics. The basic economic model of politics that has been developed - commonly referred to as the theory of "public choice" - models the political process as an implicit market with demanders (voters or interest groups) of government policies exchanging political support in terms of votes, information/propaganda, campaign contributions or other material forms of assistance for desired policies. Government (politicians and their agents, bureaucrats and regulators) will supply policies that maximize the governing party's prospects of re-election (or in the case of opposition parties, election). This view of the political process contrasts with that conventionally assumed hitherto by economists which viewed governments as attempting to maximize some social welfare function by correcting for various forms of market failure (monopoly, public goods, externalities, etc.) (Trebilcock et al, 1982; ch. 2). Implicit in the public choice approach is the view that neither the effect nor intent of many, perhaps most, government policies is to advance social welfare, but rather to construct minimum winning coalitions, often through redistributional policies, even though the impact of such policies will often, perhaps mostly, be to reduce aggregate social welfare.

Robert Baldwin has identified five different models in the literature for explaining inter-industry differences in both levels of, and changes in, trade protection (Baldwin, 1985). These are:

(1) Common interest or pressure group model: The ability of an industry to organize for the purpose of raising funds for lobbying activities.

(2) Adding machine model: the voting strength of an industry.

(3) Status quo model: The historical levels of an industry's protection and the ability of the industry to adjust to increased import competition due either to proposed decreases in protection or to changes in basic economic conditions.

(4) Social change model: The income and skill levels of workers in the industry, the nature of the international competition faced by the industry, and its importance in terms of promoting such social changes as an improved national defense capability and better environmental conditions.

(5) Foreign policy model: The bargaining ability, political importance, and income levels of the countries from which competing imports are supplied (ibid.; ch. 1).

Baldwin notes:

> Both the common interest group and adding machine models are based on a view of the political decision-making process that considers the state largely as an intermediary responding to the short-run economic interests of various pressure groups. In contrast, the other three models rest on a view of the political process that considers private citizens and government officials as either taking a long-run view of their self-interest or being concerned about the economic welfare of other groups and the state (ibid.; p. 31).

With respect to the two variants of the public choice model, Downs (Downs, 1957) and subsequently Olson (Olson, 1965) argue that narrow producer interests are likely to dominate over thinly-spread consumer interests. This is largely a function of the differential mobilization and hence lobbying costs faced by producer and consumer interests. The larger the per capita stakes in an issue the stronger will be the incentives to overcome information and transaction costs in organizing, and the fewer the affected stake-holders the easier it will be to overcome the free-rider problem that afflicts large interest groups whose individual members have small per capita stakes in the relevant issues. This framework would tend to suggest that highly concentrated industries with few firms, perhaps also highly geographically concentrated, and perhaps also with highly unionized work-forces, are likely to be able to organize most effectively and, therefore, are most likely to be successful in securing favourable policies from government, including trade protection.

Whatever the empirical validity of this model (reviewed below), a major theoretical difficulty with it is that it appears to imply no equilibrium in the political process, at least in the context in which it purports to apply, short of a corner solution entailing infinite protection for the affected industries (a total ban on imports). This is manifestly not what we typically observe, even in concentrated industries, which is sufficient to raise some prima facie doubts about the subtlety of the model. As Destler and Odell point out in a recent, important study (Destler and Odell, 1987), the weakness in the model is its simplistic assumptions that, on the one hand, domestic producers, who are easily mobilized politically, uniformly favour protectionism and that, on the other, the only or principal cost-bearers are ultimate end-users or lay consumers, who are politically disabled. More specifically, the model first ignores the fact that imports will often be intermediate inputs into another industry, e.g., textiles and clothing, steel and automobiles, and the industry purchasing the inputs will normally find it rational to resist cost-increasing policies. Second, the model ignores the fact that export-oriented industries may have reason to fear retaliation by foreign countries to restrictions on their exports in the form of reciprocal trade restrictions, thus creating an incentive for such industries to resist domestically imposed trade restrictions. Thirdly, the model overlooks the fact that importers-distributors and large retail chains that import and sell large quantities of lower priced imports constitute a major producer constituency that will be disadvantaged by trade restrictions. Fourthly, while it is true that consumers may face information costs, transaction costs, and strategic impediments to effective group mobilization, as individuals they still possess votes which is a resource that firms, whatever their other political resources, by definition do not possess. The determinants of the political rate of exchange between various political currencies, e.g., votes and financial resources, are not well addressed in the special interest group variant of the public choice model of the political process.

The second variant of the public choice model - the adding machine model attributed to Caves (Caves, 1976) - predicts that government will adopt policies that represent the views of the majority of those voters who are most concerned about an issue. In a trade context, this means those individuals employed in industries subject to import competition. Governments will favour industries with the largest number of voters, i.e., employees. These industries may or may not be highly concentrated (in contrast to the predictions of the narrow special interest group model) (Baldwin, 1985, p. 13).

Again, as with the latter model, a problem with the adding-machine model is that it does not appear to imply or define a political equilibrium short of infinite protection, at least in those contexts to which it purports to apply. Secondly, in common with the first model, it yields no predictions per se as to the type of trade restricting instrument that a government will be likely to employ - e.g., tariffs, global quotas, or VER's.

The issue of choice of governing instrument in a trade context is explicitly addressed by Rowley and Tollison (Rowley and Tollison, 1986). They first attempt to explain why government might adopt trade policies that a majority of voters would find antithetical to their interests:

(i) Those who lose from specific reductions in tariffs, or other terms of trade protection, are not compensated. Where such losers constitute a decisive voter set, their uncompensated votes will be cast effectively against trade liberalization.

(ii) Prospective beneficiaries from trade liberalization have less incentive to inform themselves on the issue, to organize and to support pressure groups, even to vote, than do the losers. The benefits from trade liberalization have strong public good characteristics and are derived in an uncertain future, whereas the associated costs are concentrated, immediate, and highly visible.

(iii) Where the beneficiaries of trade protection are geographically concentrated, a geographically-oriented, first-past-the -past vote system may provide them with differential vote representation in the legislature.

(iv) Where those who benefit from trade protection evidence differentially intense preferences on the issue, logrolling or vote trading within representative political systems may overrule an underlying majority vote, even though it results in an overall net loss of welfare to society (the paradox of logrolling).

(v) Where trade protection is a source of immediate government revenue (e.g., tariffs), governments may trade off a future generalized loss of political support for current revenue, especially where the latter can be diverted to purchase specific votes among favoured constituencies (ibid.; p. 314).

The authors also argue that the dead-weight costs of trade restrictions consist not only of consumer welfare losses sustained by consumers priced out of the market by induced price increases (the Marshallian or Harberger triangle in the standard monopoly diagram), but also the prospective transfer of surplus from remaining consumers to producers, which will be largely dissipated in socially wasteful rent-seeking activities (Tullock, 1967; Krueger, 1976; Posner, 1975).

They then proceed to explore the political properties of tariffs, quotas and VER's, and predict a political bias towards the latter two classes of instruments. For example, import quotas guarantee an outer bound of import penetration and if assigned to domestic entitlement holders (e.g., importers) confer scarcity rents on a secondary category of domestic rent seekers. To the relevant government department they offer a more complex system of administration than tariffs and hence a larger budget. Quotas also render the costs of protection less visible to consumers than tariffs. VER's, like import quotas, confer rents on primary rent seekers (the protected domestic producers) while also conferring scarcity rents on secondary rent seekers in the form of enfranchised foreign exporters, which may mitigate the prospects of foreign retaliation. VER's, in part because of their informal nature, impose the least visible form of costs on consumers relative to quotas and tariffs.

However, like the other variants of the public choice framework, that offered by Rowley and Tollison has limited predictive powers as to which industries will be protected and to what extent: even if there is a general domestic political bias towards quantitative restrictions over tariffs, this offers little by way of specific prediction as to which industries will receive which of the three forms of protection, and which none at all, nor does it yield predictions of the level of protection, e.g., relaxed versus stringent quotas.

The three non-public choice models of the trade policy process noted by Baldwin - the status quo model, the social change model, and the foreign policy model - in contrast to the behavioural assumption of short-run economic self-interest adopted by the public choice models, admit of long-run pursuit of self-interest by economic agents and political actors, autonomous behaviour by public officials who are not simply intermediaries acting on the wishes of the electorate or some part of it, and altruism on the part of public and private actors concerned about the welfare of individuals who may be affected by import competition (or conversely, arguably about the welfare of individuals in foreign countries disadvantaged by denial of access to domestic markets for their goods).

The difficulty with these latter three sets of models as positive frameworks for predicting trade policy decisions is that their behavioural assumptions are so vague as to be largely untestable, and are likely to provide a positive rationalization for almost any conceivable set of trade policies (and thus predict or explain nothing).

A limitation in all five of the above models is that they are essentially static rather than dynamic in their orientation and do not well address changes in the political demand and supply functions for trade protection over time - in our context, the rise of the so-called "New Protectionism" over the past decade or so.

Some obvious factors that bear on either the scale or the costs of adjustments to changes in trade patterns can be identified (OECD, 1985b; ch. 10). The emergence of Japan and the NIC's as major industrial powers has increased import penetration in a number of sectors in mature industrialized economies in recent years, increasing the scale of adjustment required relative to rates of downside adjustment experienced in the first two post-war decades. Depressed demand in these sectors as a result of global recession in the early 1970's and 1980's (partly induced by oil price shocks), as well as domestic productivity improvements through technological change that have reduced required labour inputs, have exacerbated the scale of adjustments confronted.

The costs of adjustment have also been exacerbated by slow growth in other sectors of industrialized economies, including export sectors, again in large part a function of the recessionary environment of the early 1970's and early 1980's. The declining efficacy of tools of domestic macroeconomic policy to ensure stable rates of economic growth without inflation, the reduced ability of governments to increase social welfare expenditures in the face of mounting budgetary deficits, highly volatile international exchange rates and increased corporate capital mobility, have all constrained alternative adjustment strategies to trade protection and hence enhanced the political attractiveness of the latter. Reduced flexibility may exist at the level of the firm, through rigid wage policies often resulting from long-term indexed collective agreements or, at the limit, through nationalization (in some countries) of major declining sectors. Reduced flexibility may also exist at the level of the individual, through increasing fixities such as increased levels of home ownership, pension and seniority entitlements, dual wage earner families and higher school leaving age, that reduce geographic mobility (Green, 1984). All these factors may have increased the adjustment burden sought to be transferred to trade policies. The decline of the U.S. as the hegemonic world economic power with a substantial economic stake in a liberal global trading regime, and the power and influence to advance this goal, is also often identified as a cause of the rise in protectionism (Keohane, 1985).

These factors, and probably others, are clearly pertinent to this trend, but they scarcely add up to a tightly structured dynamic positive theory of the political determinants of trade protection with precise and testable predictive implications.

With this relatively unpromising review of positive models of the trade policy process as back-drop, we now proceed to review briefly the empirical evidence on the political determinants of trade policy.

(b) Empirical Evidence on the Political Determinants of Trade Protection

The empirical evidence on most postulated political determinants of trade protection is as ambiguous as the positive theories that underlie the postulates.

With respect to industry concentration, Pincus (1975) (U.S.), Helleiner (1977) (Canada), Caves (1976) (Canada), and Ray (1981) (U.S.) (with respect to tariffs), all found that highly concentrated industries received more protection. Anderson and R. Baldwin (1981) (international), J. Baldwin and Gorecki (1985) (Canada), Ray (1981, 1982) (U.S. with respect to non-tariff barriers), Finger et al (U.S.), Cable and Rebelo (1980) (Britain), Laverge (1983) (U.S.), all found that industry concentration had a negative or insignificant effect on the likelihood of protection.

With respect to geographic concentration, Pincus (1975) (U.S.), Biggs (1980) (Canada), and Cable and Rebelo (1980) (Britain), all found that regional concentration had a positive effect on the structure of protection. However, Laverge (1983) (U.S.), Anderson and Baldwin (1981) (international), and Glismann and Weiss (1980) (W. Germany), all found regional concentration to have a negative or insignificant effect on the supply of protection.

With respect to industry size, Anderson and R. Baldwin (1981) (international), R. Baldwin (1985) (U.S.), and Laverge (1983) (U.S.), found that large industries (in terms of employees) were more likely to receive protection. However, Cable and Rebelo (1980) (Britain) found both industry and firm size to be unimportant in explaining trade protection. Baldwin and Gorecki (1985) (Canada) found industry size (in terms of number of employees) to have a negative impact on levels of protection, but that the absolute surplus created by protection is larger for a large industry.

With respect to labour intensity, Anderson and R. Baldwin (1981) (international), Ray (1981) (U.S.), Riedel (1977) (W. Germany), Anderson (1980) (Australia), Mahon and Mytelka (1983) (Canada, France), Lundberg (1981) (Sweden), found that labour intensity is positively related to the supply of trade protection. Ray (1981) (U.S.), Glissman and Weiss (1980) (W. Germany), J. Baldwin and Gorecki (1985) (Canada) found that labour intensity had a negative or insignificant effect on the supply of protection.

With respect to wage and skill levels of labour, most studies find that low-wage industries are likely to receive more protection: Baldwin and Gorecki (1985); Anderson (1980); Caves (1976). Studies also find that industries with low labour skill requirements receive higher amounts of protection: Helleiner (Canada); Herander and Schwartz (1984) (U.S.); Riedel (1977) (W. Germany); Lundberg (1981) (Sweden).

With respect to unionization, Baldwin and Gorecki found that the degree of unionization of an industry's labour force was an unimportant explanatory variable (Baldwin and Gorecki, 1985).

Both J. Baldwin and Gorecki and R. Baldwin find that broad-based, not narrowly-based support for trade protection is a more powerful explanation of the level of protection supplied. R. Baldwin argues that models of the trade policy process that postulate that narrow special interest groups acting on their short-run economic self-interest will dominate the process do not fit the evidence as well as models that emphasize long-run self-interest or a concern for the welfare of others. He suggests that "the lower duty cuts in the Tokyo and Kennedy Rounds to industries characterized by a large proportion of unskilled, low-paid workers, who are generally not well organized for pressure group purposes is an example of such an action" (Baldwin, 1985; p. 178). J. Baldwin and Gorecki conclude that "voters do seem willing to consider adversity and adaptability characteristics. Thus, while self-seeking behaviour is an important determinant of the tariff process, altruism would appear to act as a constraint upon the process" (Baldwin and Gorecki, 1985; p. 50).

Destler and Odell (Destler and Odell, 1987) find that in fourteen product specific trade policy episodes in the U.S. since 1976, importers, exporters, and retail chains have often successfully exerted political influence in avoiding or diluting specific trade protection measures, that their influence seems to have increased in recent years in such episodes, but appears to have declined in respect of generic trade protection measures.

One or two observations are in order on these findings. The empirical consensus on the significance of wage and skill levels in industry labour forces and to a lesser extent of industry size (in terms of number of employees) does not address, or readily accommodate, some prominent recent examples of protectionism, in particular quantitative restrictions in the steel and auto industries, where the work-forces protected have often been compensated at wages substantially above the average manufacturing wage. Here, explanations from altruism would need to rely on public perceptions of the fairness of protecting long-standing economic expectations from sudden and substantial diminution (the status quo model), or of maintaining communities, rather than a collectively shared concern for the less well-endowed in society (a Rawlsian maximin value).

Second, even if altruism and status quo values are significant, it is not obvious why this would lead to broad-based support for policies that impose costs on (or "tax") the cost bearers at levels that are often hugely disproportionate to the gains to the beneficiaries, if other less expensive (more efficient) policies can be deployed which vindicate the same values and interests, with a smaller redistributive impact. This suggests the possibility of information failures in political markets, at least with respect to choice of policy instrument, if not with respect to the case for some kind of assistance.

Thirdly, the empirical evidence on the political determinants of trade protection is, in many important respects, so mixed that support can be found for or against almost any positive model of the political process. R. Baldwin concludes "that an eclectic approach to understanding this behaviour is the most appropriate one currently. Until the various models are differentiated more sharply analytically and better empirical measures for distinguishing them are obtained, it will be difficult to ascertain the relative importance of different motivations of government officials under various conditions" (Baldwin, 1985; p. 180). An "eclectic approach" is, of course, no model at all in terms yielding testable implications or predictions at the level of positive analysis, and in terms of normative implications, provides very little purchase on those features of the policy-making process which, if modified, are likely to yield superior policy outcomes. Perhaps what can be said is that the evidence does not suggest an iron law of politics that inexorably drives governments, in particular sets of circumstances, to the adoption of particular trade restricting policies. Fortunately from a normative perspective, degrees of policy latitude seem quite significant.

IV. CONCLUSIONS

The evidence on the disproportionality between costs and benefits of trade protection policies is overwhelming. Arguably, from a communitarian perspective these cost/benefit disparities merely indicate how highly voters value community stability -- yet despite their enormous cost to consumers and taxpayers in general, trade restrictions have, in the sectors studied, often failed to prevent major employment contraction, with the consequent disruption of communal structures. The rents captured by firms from trade restrictions are often clearly far in excess of the amount required to pay the full cost of each job maintained, suggesting that from a strong "stay option" perspective there would be an absolute preference for even a 100% labour subsidy over trade restrictions. While arguably in some cases, a 100% subsidy would not be enough to induce a firm to stay in a given community, if the opportunity costs of not exiting were extremely high, in these instances an equivalent subsidy to other sectors or firms to create employment in the same community would vindicate communitarian, as well as utilitarian and liberal contractarian values, more efficiently than trade protection. For example, it makes no sense at all to "tax" U.S. consumers of specialty steel $1 m. per year for each job preserved in the domestic specialty steel industry, or to tax U.S. consumers of automobiles $160,000 per year for each job preserved in the domestic auto industry when the average annual compensation of U.S. autoworkers is less than one quarter of this figure (Crandall, 1986; p. 8).

As we have sought to show, why such domestic policies are adopted by governments is a crucially important but complex question. In part, these policies reflect the enduring legacy of the mercantilism that Adam Smith intellectually demolished over two hundred years ago. Mercantilist attitudes remain deeply embedded in the very structure of the GATT and in much international and domestic trade discourse. Allowing foreign imports into a country is viewed as "a concession", entailing presumptive losses to the domestic economy, that can only be justified if a country's trading partners make reciprocal "concessions" of equivalent value. This legacy suggests that the intellectual refutation of mercantilism, and the case for liberal trade policies, must continually be re-argued both at the level of theory, and more importantly, at the level of the empirical evidence of the self-inflicted costs from denial of the theory. That the costs are primarily self-inflicted by nation states in their adoption of trade protection policies requires emphasis. The political battle over trade liberalization is not primarily a matter of international relations. We are deeply skeptical that the cause of trade liberalization can be substantially advanced by focussing principally on the substantive norms of the international legal order (as reflected primarily in the GATT). It seems highly unlikely that sovereign nation states will voluntarily accept major new internationally-imposed constraints on their domestic policy-making autonomy, without prior substantial changes in the political supply and demand functions for trade protection in domestic policy-making processes. International norms and procedures may, at the margin, be able to reinforce domestic policy tendencies; they are rarely likely, however, to be able to flatly countermand them.

Thus, re-shaping the politics of trade protection must begin with domestic political processes. We accept, with Keynes, that ideas often matter more than special interests, and that re-articulating the intellectual and empirical case for liberal trade policies can promote more rationalistic politics, even within existing political institutions and processes. We also believe, however, that political institutions and processes importantly shape, channel and constrain the demands that are made on the political system. When the costs of trade protection so consistently and dramatically exceed the benefits and when other policies are available that can meet the legitimate ethical and distributional concerns posed by the adjustments required by trade liberalization with much smaller reductions in general welfare, it seems clear that domestic political markets often fail in terms of both the economic and ethical criteria outlined in chapter I. Reform of trade policies must thus begin with domestic policy-making processes rather than with the international legal order, which should be viewed as a complement to, but not a substitute for, well-functioning domestic political systems.

We do not minimize the complexity of this task. The unsatisfactory state of public choice theory on trade issues and the inconclusiveness of the empirical evidence on the critical political variables make it difficult to pinpoint with confidence the particular sources of these political market failures and hence to prescribe institutional correctives to them. Moreover, even if these difficulties were resolved, one must still confront the fundamental conundrum of whether a biased polity would accept institutional reforms designed to remove that bias. We pursue a number of these themes at greater length in the concluding chapter of this study.

3 INDUSTRIAL SUBSIDIES AS A RESPONSE TO SECTORAL DECLINE

I. OUTLINE OF CHAPTER

This chapter considers the costs, benefits, and economic and political determinants of subsidies to declining industries. We consider both theoretical perspectives and empirical evidence with respect to the sectors and countries that are the focus of this study.

Sector- and firm-specific government aid has constituted an important element in the response of every major industrialized country to declining industries. Even in the United States, where national ideology and trade policy eschew most direct forms of subsidy, tax concessions and deregulation (e.g., relaxed environmental controls) have been used to reduce the costs faced by declining industries and shift them elsewhere.

According to neo-classical economic theory, subsidies -- even and especially to declining industries -- will be rarely justified. Market forces themselves will serve to efficiently redeploy factors of production from less productive to more productive uses; if rigidities or distortions in the market -- such as sticky wage rates or scarce capital -- hinder such redeployment, subsidies to industry may sometimes be called for. But they will be a distinctly inferior alternative to policies that address the distortion itself -- such as deregulation of capital markets, more flexible wage policies, or payments to workers which cover the cost of changing jobs and/or regions. Even where subsidies to industry are directed to contraction of output and employment -- hence orderly exit -- economists generally conclude that adjustment would have been more rapid and much less costly were government to have done nothing at all (cf. Yamazawa, 1983; Carllson, 1983).

When one turns to the public choice or economic theory of politics, however, the conclusion reached is that subsidization is often the outcome of political demands --governments respond in a vote-maximizing fashion to requests for aid from industries, unions, and workers (Olson, 1982; Stigler, 1971). Moreover, not only government aid as such, but its form and extent, essentially depend upon irreducible and (in the short-term at least) unalterable preferences of voters.

This political economy of subsidies, then, seems to lead to a dilemma: subsidization is almost never economically rational, on the one hand, but on the other hand, it is politically inevitable. Thus understood, the theoretical analysis of subsidy policy becomes an exercise in the description of human folly, rather than a means of making policy choices more rational. The structure of the GATT Code on Subsidies is itself a reflection of the dilemma. The Code recognizes that subsidies may distort comparative advantage and provides both unilateral retaliatory and multilateral remedies for injury to trade from domestic subsidization. But it also recognizes as legitimate policy instruments, inter alia, regional subsidies, subsidies to sustain employment and to facilitate industrial restructuring (Code on Subsidies and Countervailing Duties and Key Articles of the GATT, 1979, Preamble, Arts. 6 and 11).

The converse image of the national political economy approach to subsidies is the international political economy approach. This approach seeks to achieve the triumph of long-term community self-interest (abolition of subsidies, so that international deployment of the factors of production fully reflects changing comparative advantage) over short-term national political interest (saving jobs, winning votes) through sovereignty-limiting institutions and rules. Whereas in the national political economy approach the state is driven by the preferences of voters, the international political economy alternative sees the state as a vital, significantly autonomous actor in the adjustment process (Ikenberry, 1986). Once convinced of the benefits of cooperative limitation or abolition of subsidies states have the capacity to cede their sovereign right to pursue these policies. The most important example of the success of such sovereignty-limiting co-operation is the removal of tariff barriers through the post-War GATT regime (Keohane, 1985).

Just as the national political economy approach gives little weight to the ability of the state -- and the institutional structure of liberal democratic governments -- to shape the preferences of voters through its information and leadership functions, the international political economy approach is open to criticism for underestimating the importance of domestic politics in setting limits to the state's capacity to cede sovereignty. For example, the very legitimacy of the liberal democratic regimes that emerged out of post-war Europe is closely related to their capacity to wield a wide range of instruments to cushion the social consequences of economic vicissitudes -- the lesson that massive unemployment, economic instability, and decline of industrial strength can endanger liberal democratic politics will not easily be unlearned in Europe. It is noteworthy that despite the attempt to limit the ability of member states to subsidize in the Treaty of Rome, EC subsidies policy has become increasingly lax -- the Community has added its own subsidies to those provided by member states, and has come to legitimize the almost absolute right of member states to use subsidies in response to sectoral crises (Swann, 1983).

In this study, we attempt to develop an approach to both the domestic and international discipline of subsidization as a response to declining industries which seeks to avoid the shortcomings of both the national and international political economy approaches.

Our main hypothesis is that subsidization -- like trade protection-- does emanate from embedded voter preferences for government intervention to halt, or at least mitigate the consequences of, industrial decline. On the other hand, we see the choices of specific strategies and instruments of intervention as not in themselves driven by unalterable voter preferences, or interest group demands, but as choices that have very much to do with perceived costs and benefits of alternatives, changeable perceptions and biases of both publics and policymakers, and with actual available information about an industry's prospects, the realities of international competition, and techniques for regaining or shifting comparative advantage.

Voters are prepared to pay a significant price for the ethical concerns (e.g., community stability) underlying their preference for subsidization. But this does not mean that, with full information about the costs and benefits of alternatives, they will not choose the least costly means of achieving these goals. Moreover, it may be that when adequately informed about the future prospects of a given industry, or when fully aware of how high the price is of intervention, they will in some cases simply decide that intervention is not justifiable. In our empirical analysis, we seek to highlight the extent to which--depending on their context--different strategies and instruments of intervention can entail vastly different costs and benefits, and how lack of information or incorrect assumptions or ideological and cultural biases have often been decisive in the choice of costly and ineffective strategies and instruments over less costly and more effective ones.

We conclude that the quest for a multilateral sovereignty-limiting instrument to discipline subsidies is elusive and probably misdirected. Abolition of all subsidization is politically infeasible, if only because in ceding the right to subsidize, states would be giving away some of their most potent tools of social policy, economic control, and political survival. Yet attempts to ban some types of subsidies (i.e., regional aids or equity injections) while permitting others fall prey to the same conceptual impasses reflected in the Tokyo Round negotiations, where agreement was reached that subsidies should be subject to international discipline, only by renouncing the attempt to spell out which subsidies are permissible, and which are impermissible.

Whether a particular subsidy is an appropriate response to decline will depend on the particular country, its national ideology, the structure of government-industry relations, fiscal policy, and also the problems within particular industries. For example, nationalization would be an option difficult to implement in the United States, given American values and the lack of governmental structures to directly manage major industrial enterprises. In Sweden, however, it might be the most fitting response to decline, allowing state co-ordination of a strategy for adjustment accepted by government, unions, and firms. On the other hand, deregulation as an instrument of aid to industry -- quite popular in the USA -- might be totally unacceptable in Sweden, where national values reject firms imposing social costs such as pollution on the public at large.

This illustrates that the second best argument that some specific forms of domestic subsidization be banned is inherently problematic, since no form is inherently more destructive than any other. The costs and benefits of subsidies cannot be predicted or ranked from the form they take, but are variable depending on their context.

II. A FRAMEWORK FOR ANALYSIS OF SUBSIDY POLICY

(i) Decline, Adjustment and Subsidization

Although changing comparative advantage, changing technology, and--perhaps most importantly -- changing human preferences have led to the rise and fall of many national industries over the centuries, it is only quite recently that the concept of "industrial decline" has become a major preoccupation in debates over economic policy. In market economies where factors of production are constantly shifting between uses and even between nations, does the decline of industries or firms signify anything more than the natural, expected course of events? Indeed, one would have thought that post-war trade liberalization reflects, if anything, a heightened acceptance of the inexorable laws of comparative advantage. While specific government aid to ailing industries or firms has been practiced for centuries, it is in the last decade that in North America and Western Europe "industrial decline" has come to be seen as a crisis, requiring systematic, strategic state intervention.

This "crisis" is a consequence of the confluence of several factors: first, during the 1970s the world economy experienced a number of "shocks", such as the oil crises, and decline in demand for certain basic products and commodities, at a time at which most industries were investing and producing on the assumption that growth would continue; secondly, technological change was much more rapid than previously experienced; thirdly, diffusion of technology and production techniques to NICs occurred very quickly, whereas most government and industry planners in the older industrialized nations had assumed that the Third World would remain for a long time limited to primitive industrial and commodity production. In sum, there was nothing cataclysmic in what happened, but rather the sense of crisis comes largely from the contrast between new realities and the strong expectations of growth or at least stability that were built up in the 1950s and 1960s, as well as the strain on peoples and governments in adapting to and accepting change at an unprecedented rate.

Furthermore, many of the industries in decline have traditionally been identified with national strength or prestige -- steel, autos, and shipbuilding are prominent examples. In the United States, a whole literature has developed warning of "deindustrialization", of the supposed risk that America will become a nation of "hamburger stands" and R and D laboratories (see for example Bluestein and Harrison, 1982). Such a scenario has been questioned as unsupportable by empirical evidence (Lawrence, 1984) and some analysts consider it as offering more opportunities than losses (Reich, 1983), yet the notion of "deindustrialization" does evoke real popular fears and anxieties about the presumed shift in the direction of a services - oriented economy, (Peters, 1986).

It is important then in order to analyze subsidy policies as a response to industrial decline to identify precisely the senses in which an industry may be in decline. The following are all ways in which industries may be in decline; of course, these factors often operate together to produce a "crisis" in an industry -- but separating them out is a useful, if frequently avoided, step in diagnosing the nature of the problem.

(a) Cyclical Changes in Demand and in Factor Costs

It is of course well-known that rapid, unpredicted changes in demand, or in factor costs, can have a devastating impact on an industry's profitability. These changes may, indeed, be quite temporary, but whether a given firm or even an industry can weather the storm will depend upon its capital base, the availability of financing, and also upon hedging strategies adopted to cushion against such changes -- strategies such as taking positions in futures markets, foreign exchange trading, long-term supply contracts, lay-off provisions in employment contracts, and diversification. In some instances, such as the massive escalation of OPEC oil prices in the early 1970s, even firms that have taken rational measures to guard against temporary disruptions may face disaster--and in such instances public strategies for stabilization may be appropriate, and in as much as they counteract temporary market vicissitudes (induced in part by cartel behaviour) they may be considered as non-distortive. Of course, in their self-interested optimism, government officials, unions, and firms may seek to classify long-term or medium-term trends as mere unpredictable, temporary disruptions.

(b) Long-term Decline in Demand

World demand for given products changes over time, and with it the demand for inputs to make those products. The reason may be technological changes which allow cheaper substitutes to fulfill the same needs, or that needs and tastes have themselves changed. Examples of the former are slumps in the world demand for steel in the 70's (many substitute metal alloys and plastics now perform the functions of "ordinary" steel) (Goldberg, 1986), and of the latter, a current fashion preference among consumers in industrialized countries that involves considerably lower textile consumption (OECD, 1987c). In a perfectly functioning market, the effect of overall decline in world demand over the long term is that marginal firms will fail, overall output will be less and will be shared among the more efficient firms that remain. Since, given existing comparative advantage, a particular country's contribution to world output may be "marginal", it is logical that in some cases significant decline in world demand will lead not just to exit of inefficient or marginally efficient firms but also of entire national industries from the global market.

(c) Declining Competitiveness/Shifting Comparative Advantage

The above focuses on global trends which impact on the state of an industry in general, although clearly their effect is disproportionate, falling most heavily on the least efficient or least far-sighted firms and national industries. However, other kinds of changes can profoundly affect the share of the global market that each country has. For a very long time before political economists began discussing industrial decline, it was well known that wage costs were in general much lower outside Europe and North America. Yet in major industries, it was thought that these two continents would continue to dominate world markets: whatever disadvantage might be generated by high wage rates would be more than made up for by superior infrastructure, technology, worker productivity, and industrial organization. But in fact while the wage differential has clearly narrowed somewhat, the latter differences have, in the case of Japan and a handful of major NICs, been significantly narrowed or indeed (in the case of Japanese productivity and technological applications) even reversed.

Thus, it is somewhat misleading to suggest, as does Reich for example (Reich, 1983), that decline has been due to inefficiency, technological backwardness, and bureaucratic rigidity in North American industries: even if the Japanese had merely caught up to North Americans in these areas, they would still have acquired an overall comparative advantage because of the wage cost difference. However, some firms within North American industry might be able actually to do better than the Japanese or NIC producers, in these non-wage factors, and they might survive in the world market, despite a general shift of comparative advantage. This might occur if production methods were to become more capital and less labour-intensive, thereby minimizing the importance of the wage cost differential. But of course, while the result might be viable firms, it would still involve significant loss of employment, as capital replaced labour in the production process.

(ii) The Political Economy of Subsidization Strategies

(a) Maintenance of Output and Employment

The most politically straightforward -- but most economically retrograde -- subsidization strategy for declining industries is to maintain output and employment in the face of declining demand and/or prices. The troubling questions of what is wrong with an industry, and how government economic and industrial policy should be changed to address what is wrong, are entirely avoided. No demands to change or adapt are made of the firms and workers involved. Where firms or industries are only in decline because of temporary changes in demand or prices, such a strategy is perhaps defensible, since once the cycle turns up, the subsidy will no longer be needed. In theory the social costs of the disruption caused by market vicissitudes (costly redeployment of assets through bankruptcy proceedings, sudden large scale lay-offs) may exceed the cost of the subsidy (Trebilcock et al., 1985, ch. 4).

However, as a strategy to address longer-term declines in demand or in comparative advantage, output and employment maintenance is economically disastrous. The longer adjustment is postponed, the more costly and the more difficult it becomes. The gap continues to widen between demand and subsidized output, leaving the government with the choice of either constantly increasing the rate of subsidy or abandoning its objective of output and employment maintenance (Flam, Perssom, Svenson, 1983).

Of course, governments may decide consciously to maintain firms or industries where the private rate of return falls below the level required to sustain them without government aid, if the social rate of return is considered to exceed that which could be captured by the firm itself. This concept of the difference between private and social return evokes the existence of non-economic goods (national security, or national prestige) not reflected in the market (positive externalities) which governments have a mandate to pursue (Denton et al., 1975).

Since it is often impossible to quantify these goods, it is very difficult to know whether the cost of the subsidy is lesser or greater than the non-economic benefits it confers. Industries such as steel and shipbuilding have traditionally been considered strategic--as essential to the industrial apparatus required for a state's self-defence or assertion of sovereignty (Hayward, 1986). From the outset, for example, the United

States and France subsidized their shipbuilding industries to whatever extent was necessary to allow domestic production to continue, since making one's own merchant ships was considered a vital strategic asset. Although in the nuclear age this assumption no longer held, the subsidies continued, and were not even rethought until the mid-1970s. In effect, they had become a means of preserving jobs, rather than essential instruments of national strength.

It is even questionable whether production subsidies perform their primary function--to maintain employment. Since domestic subsidies cannot increase aggregate demand, the jobs they create or maintain in one firm will be lost elsewhere. Similarly, industry-wide subsidies will maintain employment in the targeted industry, but will retard the creation of jobs in other industries that would occur if factors of production were redeployed (Usher, 1983). Thus, what subsidies affect is the distribution of jobs and output within the economy. Understood as a redistributive instrument, subsidies must be carefully scrutinized. For example, from one of the ethical perspectives developed in Ch. I (that of social contractarianism), government policies, to be legitimate, must be to the advantage of the least advantaged. From this point of view, preserving high-paying skilled positions of senior workers in the steel, auto or shipbuilding industries, at the expense of new employment being created in service industries (which would be open to unskilled, unemployed young people) seems highly questionable. On the other hand, preserving employment in the textile industry might be more justifiable on social contractarian grounds, given the high percentage of women and members of disadvantaged minorities who are textile workers, and given their limited capacity to transfer their skills elsewhere.

(b) Rationalization and Renewal

Instead of regarding major industries as permanent losers -- as Robert Reich among others has urged (Reich, 1983) -- it is more appealing to firms and politicians to consider them as salvageable through modernization and rationalization of production. Our analysis of the meaning of decline suggests that modernization in itself will often not be enough to redress shifts in comparative advantage. In some cases, however, if targeted toward the most efficient firms in the industry, it may produce a few winners which are exceptions to the general pattern of comparative disadvantage.

Where decline coincides with a period where (e.g., due to factors such as heavy public borrowing) private capital is scarce and/or very expensive, there may be an argument for government intervention in the form of loans or grants for renewal (Lawrence, 1984). Yet increased debt financing may not be appropriate for firms in trouble. Their difficulties may have led to an already heavy debt load, and further loans might lead to overleveraging -- a debt-to-equity ratio so skewed that the firm might collapse before it has time to renew itself (Rohatyn, 1983). Why then not leave declining firms to the equity market to finance their own renewals? If investors find that a firm's prospects for renewal seem strong they will be attracted to purchase equity. Indeed, civil servants seem in general less well situated than private investors to determine whether renewal is really feasible, or which firms within a declining industry are good prospects and which are not.

Yet in a market dominated by institutional investors such as pension funds, or insurance companies, firms in decline may not have the high credit ratings that such investors typically seek, or which they are required to seek by fiduciary obligations. Similar factors may also prevent a successful bond issue. Government might intervene by purchasing equity with which the firm can finance renewal, or through some form of backing that has the effect of upgrading the quality of the shares or bonds.

There are a number of important questions to be raised with respect to government-subsidized rationalization. First of all, increases in productivity or efficiency themselves are often held up as the measures of success of government subsidy programs. Yet these are not as such public benefits or goods. If the government's purpose in subsidizing is to prevent loss of jobs, it must reckon with the prospect that the productivity and efficiency gains from rationalization may largely come from significant reductions in employment, thereby substantially mitigating the public benefit from subsidizing. Ultimately, the net jobs saved may not be worth what will often be the enormous cost of modernization, or it will be much cheaper to create new jobs in other, non-declining sectors. Secondly, it is difficult to estimate in advance whether even a highly successful modernization program will involve sufficient gains to redress or counter loss of comparative advantage; even a much more efficient industry may remain marginal in terms of world markets, and if demand further declines, may become non-viable. Thirdly, if there is an equity financing gap experienced by declining industries or firms, there may be prospects of eliminating it by means of aggressive private investment banking. It is arguable that instruments such as "junk bonds" address themselves to just this gap. Ultimately, relaxation of legal restrictions on high-risk investment instruments may be an attractive alternative to government financing.

(c) Subsidized Exit

Pioneered by the Japanese, who introduced a formal structure for subsidizing exit from declining industries with their Structurally Depressed Industries Law of 1978, this strategy is the most congenial to economic theory, for rather than attempting to counter or avoid changing market realities, government instead uses its resources to redistribute the costs of adapting to those realities, thereby making adjustment more palatable socially and politically (Peck, et al., 1986; OECD, 1983a). While non-Japanese industrial policy advocates such as Robert Reich (1983b) emphasize that the orderly exit strategy involves government assuming costs of exit which would normally be borne by firms and workers, it is noteworthy that the Japanese system forces the industry itself to provide a significant part of the resources that the state initially provides to buy surplus capacity and compensate workers -- for example through a special levy or tax on the industry (Peck et al., 1986). Also, instead of creating its own labour adjustment programs, the Japanese government relies heavily on firms themselves to retrain and redeploy workers, and subsidizes them to do so. This both reduces administrative costs to the state, and also assures workers that instead of merely a limited period of public assistance payments, they will actually obtain new permanent positions, often within the same conglomerate (Peck, et al., 1986).

Yet, even as practiced by the Japanese, exit subsidization is far from a panacea. Exit is rarely if ever as rapid as decline in demand, and the government is often left with an albeit much smaller but excessively large industry, which remains very inefficient and continues to consume subsidies. Yamazawa argues, with respect to the Japanese textile industry, that subsidized exit has "tended to discourage voluntary, unsubsidized scrapping and to prolong survival of inefficient firms" (Yamazawa, 1983; p. 38). This last point highlights a major difference between orderly exit (subsidized, gradual scrapping of output throughout the industry) and market-driven exit -- in the latter case marginally efficient firms fail quickly, whereas the most efficient firms may well remain as survivors, while in the former, the least efficient firms have a strong incentive to prolong their existence through participation in subsidized orderly exit. A particularly controversial feature of the Japanese version of the exit strategy is the use of cartelization as a complement to subsidies. Firms are often permitted or encouraged by government to form a temporary industry cartel-- allocating among themselves shares of the capacity reduction targeted for the industry. As the output of each firm is fixed by agreement, price competition is in effect eliminated. Lawrence has levelled a number of criticisms at these cartelization practices: a) they do not lead to substantially more adjustment than would occur in a free market; b) cartelization shifts costs onto consumers in a "covert fashion"; c) government-approved industry cartelization or stabilization plans entail bureaucratic involvement in industry planning which bureaucrats are rarely competent to undertake; d) cartelization is counterproductive if the source of an industry's declining demand is foreign competition, which is likely to increase in the face of supra-competitive domestic prices. With respect to this last point, Lawrence claims that for cartelization to have worked at all for import-impacted industries, it must have been accompanied by (hidden) protectionism (Lawrence, 1987).

But comparing the Japanese exit strategy against a hypothetical free market is not particularly useful, since politically the choice is usually between different strategies of intervention. In comparison with other countries which have pursued different forms of intervention, Japan has a very good record of adjustment. In the shipbuilding industry, for example, Japan scrapped more capacity in the 70s and 80s than all the European Community producers put together (Todd, 1985).

While it is true that consumers bear some extra cost in the form of higher prices from cartelization, it is important to remember that the firm itself in Japan is faced with paying to a significant extent for the costs of adjustment assistance. Peck et al. suggest that somewhat higher prices may be worth paying in order to preserve an institutional structure where firms themselves shoulder the bulk of the responsibility for the adjustment process: "By coordinating capacity reduction, sometimes through cartels, public policy seeks to maintain prices at a level sufficient to permit large firms to shoulder a substantial share of the burdens of labor relocation and debt repayment, . . ." (Peck et al., 1986).

Finally, in essence cartelization is simply a means of shifting some of the costs of adjustment from the firm. Cartelization need not be the only means of doing this as part of an exit strategy--higher public subsidies would be an alternative. Peck et al. note that in Japan there is a traditional tolerance of industrial concentration, and a relatively lenient anti-trust regime. Thus, the use of cartels and direct bureaucratic involvement in planning of industry, as well, may be seen as a cultural preference, rather than a choice dictated by the economic logic of government-assisted adjustment. In any case, exit subsidization has a considerable advantage over other subsidy strategies--as the industry and its workforce decreases, the political demand for subsidization is also likely to decrease. Once an industry is marginalized it will be unlikely to mobilize enough political will to resist further adjustment, as far fewer jobs will be at stake. In the case of both employment and output maintenance, and rationalization, subsidies will often breed more demand for subsidies -- in the former case, because expectations are created that, whatever happens in the market, output and employment will be sustained, and in the latter because once an industry is modernized with public funds, governments have a substantial political stake in ensuring its survival.

(d) Adjustment to Trade Liberalization

Since the Kennedy Round of the GATT, which led to significant reductions in tariff barriers, subsidization has often been used as an alternative to trade protection. According to Blais and Foucher, "trade liberalization has had a profound effect on the range of programs for support of manufacturing industries" (1981; p. 41). In recent years, as subsidies themselves have become a major target of retaliation by trade restrictions, this trend has levelled off (ibid.). These tendencies are shown in the table below:

Table 11. Domestic subsidies to industry as shown in national account statistics as a percentage of GDP.

Country	1952	1956	1960	1964	1968	1972	1976	1980
Italy	0.89	1.30	1.51	1.23	1.67	2.29	2.60	3.01
France	1.71	2.71	1.62	2.03	2.62	1.99	2.68	2.51
Canada	0.41	0.39	0.81	0.85	0.87	0.83	1.73	2.34
United Kingdom	2.68	1.76	1.93	1.56	2.06	1.82	2.78	2.32
Germany	0.65	0.20	0.79	0.99	1.44	1.48	1.49	1.59
Japan	0.79	0.26	0.34	0.65	1.11	1.12	1.32	1.32
United States	0.11	0.20	0.25	0.44	0.50	0.59	0.34	0.43

Source: OECD, National Accounts 1951-1980, vol. 1. Main Aggregates, 1982.
a. Countries listed in order of amount of subsidies as a percentage of GDP in 1980.

In fact, both economic theory and empirical evidence suggest that subsidies are often a much more efficient response than trade protection to political demands for intervention. Trade restrictions, by making domestic prices higher than world prices, result in "misdirection of consumers" (Richardson, 1980); domestic subsidization, however, "does not discriminate between the foreign and domestic sectors so that the domestic price continues to be equal to the external price" (Krauss, 1978; p. 73). Moreover, as shown in the previous chapter, the costs of trade protection are enormous relative to the number of jobs saved. Even if a subsidy equal to the wage cost of a worker were needed to sustain employment, this would often be considerably less than the cost of trade protection to consumers.

It is important, however, to draw a distinction between replacing tariffs by subsidies, and introducing subsidies to rationalize an industry while that industry is still protected to a significant extent from international competition (as is the case with Canadian textile policy, for example). In the former instance, subsidies represent a political "buyout" of demands for protection (Aho and Bayard, 1984), whereas in the latter, there is an implicit commitment by government to maintain trade restrictions if the rationalization program does not work, or if it does not work fast enough. In either case, the industry tends to rationalize to the extent necessary to survive at the level of trade protection that remains, rather than in a global free trade environment (Williams, 1986).

(iii) The Choice of Subsidizing Instrument: Economic and Political Considerations

Given a decision to respond to political demands for intervention through one or more of the above strategies of subsidization, governments have available to them a wide variety of subsidizing instruments -- ranging from tax concessions and deregulation to bailouts and nationalization. Many analysts have attempted to rank the various instruments -- e.g. as more or less transparent, or more or less coercive and intrusive (Lowi, 1970). In fact, each instrument has its own costs and benefits which must be evaluated in the context in which subsidization is to take place.

This point can be well-demonstrated by taking the four characteristics of subsidy programs considered desirable by the OECD, as promoting positive adjustment. Subsidies should be a) temporary, b) transparent, c) linked to phasing out of surplus capacity, d) as little distortive as possible of international trade. (OECD, 1983a). No one instrument or group of instruments best embodies all these positive characteristics. For example, tax concessions are arguably much less transparent than direct grant or loan programs; as Woodside has remarked in the Canadian context, "tax incentives are rarely introduced either alongside detailed explanation of their goals or revenue costs, whereas direct funding forms part of the Public Estimates" (Woodside, 1979; p. 251). On the other hand, direct subsidy programs are more likely to create their own administrative structures and interest groups, and hence are much more likely to become permanent.

Transparency is a particularly important factor in developing efficient subsidization strategies. Enormous costs may be hidden from view, and thus public perceptions may be the consequence of a radical miscalculation of costs and benefits. Yet it is possible, by reforming domestic subsidy procedures (as noted below), to quantify and make publically available the costs of almost any subsidy instrument. This can even include deregulation, nationalization, and bailouts (see Goldberg, 1986; Wilson, 1979; Trebilcock et al., 1985). Similarly, with conditionality (or linkage of subsidization with firm or worker support for positive adjustment policies), even an industry-wide tax credit, usually regarded as one of the most unconditional kinds of subsidies, can be made conditional on very specific kinds of investment being made by firms. On the other hand, firm-specific loans have often been granted in return for very loose promises on the part of the firms concerned. What is at stake is not only the choice of instrument itself, but ultimately the political will or determination of politicians and government managers to extract strategic concessions from firms and workers in return for aid. Exactly the same instruments were used to attempt to restructure and revitalize British Leyland in the mid-seventies and in the early eighties. Yet the first program was a failure, and the later one, a success. A key difference was that unlike his predecessor, the firm's new head, Sir Michael Edwardes, was able to extract key concessions from the workers in return for continued public subsidies (Dyer, Salter, and Weber, 1987).

III. EMPIRICAL EVIDENCE OF SUBSIDIZATION

(i) Shipbuilding

From 1974 to 1986, world demand within the shipbuilding industry declined from 134 Million Gross Tons to 25 M (OECD, 1987b). Most of the major national shipbuilding industries were already heavily subsidized, with government aid often dating back to the inception of the industry in its modern form (OECD, 1976a). This massive decline in demand (especially in the tanker market, due to the OPEC-induced oil crises) was aggravated by a basic shift of comparative advantage, initially to Japan and then to NICs such as South Korea and Yugoslavia (Mottershead, 1983). The initial response of most European governments was to attempt to stem the consequences of these changes through further increases in subsidization, such that in some cases (e.g. Sweden) subsidies ended up actually exceeding value-added in the industry (Carlsson, 1983). In contrast, the Japanese, almost as soon as demand began to collapse, either abolished subsidy programs or redirected them towards reductions in capacity and assistance to unemployed workers (Boyer, 1983). Between the late 70s and the mid 80s, however, most of the other traditional shipbuilding nations came to the realization that the increases in subsidies needed to keep the industry alive were too costly, and adopted strategies of capacity reduction and/or exit.

In 1980, before this change in direction had impacted on programs, the range and extent of subsidies in OECD countries is displayed in Table 1.

Australia

In Australia, subsidies kept mounting to sustain the shipbuilding industry until 1976, when it required an estimated subsidy of 45% of production costs to make viable construction of large merchant ships in Australian yards (Rich, 1987). The government judged that to preserve the industry would require ever increasing levels of subsidy, and that decline seemed irreversible. As a consequence, subsidies were abolished altogether, with rapid collapse of the industry ensuing: within a year, one of the main yards shut, with a loss of 1800 jobs in a single, already depressed industrial community (Ibid.). In the decade following abolition of subsidies, more shipbuilding capacity was scrapped in Australia than in all the EC countries taken together (Todd, 1985).

Sweden

Public aid to Sweden's nationalized shipbuilding industry continued to mount throughout the 1970s. In 1976/77 subsidies amounted to $1,245 US per employee (Hamilton, 1983) and by 78/79 actually exceeded the value added in the industry (Carlsson, 1983). While subsidies mounted and demand declined, no national consensus developed as to whether subsidization should be linked to contraction of the industry, employment and output maintenance, or exit. Finally in the early 1980s, the non-socialist coalition government -- formed in 1979 -- moved to end assistance to the industry. Over a five year period, the shipbuilding activities of the nationalized firm Swedyard were phased out, workers redeployed to other industries, and the yards themselves converted to other uses (in one instance, an auto parts plant): extensive public funding was provided for capital investment in these new facilities. As a consequence, Sweden no longer has a commercial shipbuilding industry (OECD, 1987b).

United States

The rationale for subsidizing the US shipbuilding industry originated with the Jones Act of 1920, which requires that the U.S. merchant marine operate, for national security reasons, entirely with U.S.-made vessels. The basic subsidy was the Construction Differential Subsidy (CDS) aimed at fully compensating for the added costs of building a ship in the USA rather than in a foreign location. In the mid-1970s, as the level of subsidy required to sustain the industry mounted, government policy was rethought--having merchant ships home-built no longer was of any strategic importance, and the CDS was capped at 37%, with further reductions intended to eliminate it altogether. Finally, the Reagan Administration abolished the CDS in 1981, and took steps to abolish other indirect subsidies (such as government loan guarantees to domestic ship purchasers) [OECD, 1987b]. As a consequence, employment fell from 175,000 to 125,000 between 1980 and 1983; orders have now dried up; and one analyst has estimated that in several years exit will be completed (Todd, 1985). Nevertheless, the Jones Act provisions prohibiting use of foreign ships for the coastal trades do remain in force, and this trade protection may mitigate tendencies to exit driven by reduced subsidization.

Japan

Japan very rapidly redirected its state aid to reduction of capacity in the mid 1970s. Nineteen shipbuilding companies left the industry between 1975 and 1978, when the government and the industry agreed to a further 35% reduction in capacity, to be assisted by a 1 Billion Yen loan from the Japan Development Bank. The loan was used to buy up excess facilities at book value, and scrap them. The loan was partly repaid by sale of these scrapped assets. However, a tax was also imposed on the price of new vessels (1.3%), so that as Peck *et al.* note, the direct burden of adjustment was borne mostly by the industry itself, not by taxpayers (Peck *et al.*, 1986; p. 43). In addition, shipbuilders were provided with loans from a government-capitalized fund for the purpose of providing severance payments and relocation assistance to redundant workers (Boyer, 1983). While in fact total reduction of capacity actually exceeded the target by 35%, further reductions were clearly necessary by the mid-1980s, due to further declines in export orders (OECD, 1987b). Although some additional reductions have been accepted by the industry there is clear resistance to the exit option, as evidenced by the fact that by the early 1980's a number of production oriented subsidies (such as concessional loans for domestic purchasers of Japanese ships) had been reintroduced, even as capacity was being scrapped (Kikkawa, 1983; p. 243).

France

Until the mid-1970s, French subsidy policy was directed towards both modernization of the industry and increases in output (a 30% rise in capacity was realized for the 1971-75 period; OECD, 1976a). Hence when the crisis of world surplus capacity peaked in 1976-77, France found itself with a growing not contracting industry. While the government did change its policy to the extent of tying subsidies to freezes in output by each shipyard (Mottershead, 1983), actual reductions were not mandated. As a consequence between 1977 and 1985, virtually no capacity was scrapped (Todd, 1985). As the OECD notes, even increasing subsidization will not prevent eventual collapse of the industry, since orders are drying up despite the subsidies. At present, costs of subsidization are enormous, amounting in 1984 already to between 175,000 and 200,000 FF per worker, higher by 50% than the average annual wage in the industrial sector (Balassa, 1985; p. 314).

Britain

Long before the world crisis of surplus capacity, the British shipbuilding industry was experiencing serious difficulties. Substantial public aid was provided in the early 70s to consolidate shipyards, modernize facilities, and enhance productivity. However, unions militantly resisted any measures which resulted in employment reductions, particularly the closure of inefficient yards. In 1976 the industry was nationalized by the newly elected labour government, and provided with an injection of 300 M Pounds working capital, and an additional 65 M Pounds in modernization grants (Todd, 1985). The Government did, eventually, proceed with substantial employment cuts, and closure of inefficient yards, buying union acquiescence through a voluntary early retirement scheme, as well as redundancy payments for those forced to retire, equivalent to 145 Pounds per year of service (Strath, 1986, p. 153). British shipbuilders continue, however, to run substantial losses -- in 1986 - 87, these amounted to 148 M pounds, more than 20,000 pounds per worker (Economist, April 23, 1988; p. 61). Further employment cuts (from 6,500 to 4,500 workers) are planned by the British government (Economist, April 23, 1988; p. 61).

Canada

In Canada, production subsidies to the shipbuilding industry began in 1961, set originally at the rate of 40% to decline by 1% per year until 8% was reached in 1981 (OECD, 1976a). In the mid-70's, in response to industry pressure, the government expanded subsidization on a temporary basis (from 1977 to 1981). However, a Federal government policy review published in 1979 suggested that decline of the industry was inevitable, and that government aid should be redirected to scrapping of capacity. The industry strenuously opposed these recommendations (CSSRA, 1985), and indeed demanded vastly increased subsidization to sustain employment and output. The end result was that subsidies were left in place, but not increased, leading to decreases of employment from 14,000 in 1982 to 7,022 in 1984 (CSSRA, June 85). Finally, in June 1985 the Conservative government abolished production subsidies altogether, and since that date commercial orders have declined substantially. However, government procurement policies and the renewal of the Canadian fishing fleet (with political pressure to source from Canadian yards) will likely mitigate exit tendencies in the 1990's. De Silva notes:

"although the production subsidy was terminated, the government (has) continued to assist the shipbuilding industry in other ways such as through tariff protection, procurement, and subsidies for modernization in the form of performance improvement grants". (De Silva, 1988, p. 81)

(ii) Coal

The crisis in world demand for coal began in the mid-50s with the rapid decline in oil prices, making oil a cheaper form of energy than coal. Subsidization responses varied from exit (Japan) to output and employment maintenance (West Germany) to capacity reduction and modernization (France, Great Britain) to regional bailouts (Canada). In the late 70s, recovery of the industry was aided by the high oil prices consequent upon the oil crises, which made coal of considerable interest as an alternative fuel source. However, as prices have stabilized, this interest has waned, and plans to expand production and develop new coal-based energy products such as Synfuel have been shelved (e.g. in West Germany and the USA).

Japan

Japan initiated its strategy of subsidized exit almost immediately after oil prices began to fall in the early 1950s. In August 1955 the Coal Mining Facilities Corporation was created to provide funds to buy up the assets of uneconomic mines and for redundancy payments to displaced miners. Although funding for exit was constantly increased through the 1960s, scrapping did not occur sufficiently rapidly to prevent companies from running major losses. However, between 1960 and 1973 the number of mines was reduced from 622 to 51 (Far East Economic Review, 4 Mar 1974) and employment dropped from 231,00 in 1960 to almost 1/10th of that in the early 1980s (Economist, 1 November 1986). Exit was never completely realized, though, and in 1986 subsidies to the remaining mines amounted to Yen 40 billion. The Government, in its coal plan for 1987-1991, has recognized the need to close at least half of the remaining 11 mines at the rate of two a year, which will cost Yen 10 billion per mine in redundancy payments (Economist, 1 November 1986).

West Germany

When demand declined in the 1950s and 1960s, the German government did not actively intervene with subsidies, since rapid growth in other sectors of the German economy meant that there were adequate jobs available for displaced miners (Lucas, 1985). However, by the 1970s the government was actively subsidizing output and employment maintenance, with a 5 Deutschmark subsidy per underground worker per shift (James, 1984) and subsidies to utilities to compensate them for burning coal rather than oil, this latter subsidy being funded by a 4-5% tax on household and business energy consumption. Total public aid to the industry increased from 6.62% of value added in 1966 to 37.3% in 1978 (Black 1986; p. 108). While the government was prepared to invest large sums of money in R and D. to develop alternative coal-based fuel sources in the wake of the energy crisis, by the early 1980s the economic feasibility of such efforts was in doubt, and they were abandoned.

France

Aid to the nationalized French coal industry, Charbonnages de France, was premised from the 1960s on rationalization and contraction of output. But despite considerable investments in modernization (e.g. 440 M FF in 1965), geological conditions kept productivity quite low -- well below levels attained by West Germany and the UK (James, 1984; p. 199). On the other hand, between 1970 and 1980, coal production was halved (Balassa, 1986; p. 100). The socialist government decided in 1981 to reverse the policy of contraction and increase output substantially. This resulted in massive increases in subsidization in the early 1980s, amounting to 140,000 FF per worker in 1984. (Balassa, 1985).

Britain

Until the mid-1970s the British coal industry was able to adjust through employment reduction and modernization, with little direct government aid, although the rate of return expected from the nationalized industry was below the average for the private sector (Wilson, 1979). From 1956 to 1970, employment fell from 704,000 to 264,000, and the number of pits was reduced from 840 to 299 (Trebilcock, 1985). However, in the 1970s union resistance to pit closures increased, and acceptance of worker demands was reflected in government plans to actually increase output from the late 1970s through the mid-1980s. In 1973, the government wrote off 275 M Pounds of National Coal Board debt, resulting in a savings to the industry of about 40 M Pounds per year in interest changes (Wilson, 1979; p. 264). Almost all the losses realized by the industry in recent years have been due to inability to close inefficient pits. When the government renewed its determination to effect closures, the miners staged a year-long strike in 1983-84, with the government eventually winning agreement for closures; in 1985-86, 33,000 miners exited from the industry. The price the government paid was massive redundancy payments, amounting to 566 million Pounds in 1986 alone (Economist, 2 August 1986, p. 47).

Canada

In general the Canadian coal industry is not subsidized, although it has benefitted from public investment in rail transportation facilities, and -- in the case of B.C. -- port facilities that are crucial for reaching major markets. The port of Vancouver expanded its coal-handling capacity from 14 M tonnes in 1979 to 30 M in the mid-eighties, and as of 1984 construction of a coal terminal at Prince Rupert was underway. Additional rail links between coalfields in northern B.C. and Prince Rupert are under development, with costs in the $250-315 CDN range; a significant portion of these expenditures will be borne by the Federal government (James, 1984; p. 174). These investments have clearly been premised on steady or increasing demand for B.C. coal -- an assumption cast in doubt by heightened competition with Australia to retain the Japanese market share, and by intense pressure for price cuts by Japanese buyers (Anderson, 1986).

The major instance of subsidization, however, is to be found in the Cape Breton Development Corp., probably Canada's most important experiment with public enterprise as a response to a declining regional industry (the history of Devco, and the costs and benefits of Federal support for the company, are detailed in Trebilcock, 1985). In 1984, in response to continuing and increasing losses, a major review and restructuring of

Devco's operations was undertaken. Problem areas identified were: poor financial control, absenteeism, a high accident rate, and failure to develop new markets (Cape Breton Development Corporation, 1985). A team of consultants was brought in, and the structure of management was overhauled to emphasize rigorous accountability for expenditure at every level of the enterprise. New health and safety procedures reduced accidents by 17% and absenteeism in general by 25% in less than a year. Renewed efforts were made to develop dormant European and South American markets (Cape Breton Development Corporation, 1985, and Globe and Mail ROB 4 May 85; Globe and Mail ROB 14 May 1985).

The results of these changes were substantial: Devco's coal operations went from a loss of $49 M CDN in 1983 - 84 to a break-even position in 84-85 (Cape Breton Development Corporation, 1985). Devco proceeded with capital expenditures of about $90 M CDN in 1985, aimed at developing new mines at Phalen and Donkin, to be in operation by the end of the 80s. The new facilities will incorporate recent technologies to greatly increase worker productivity (Globe and Mail ROB 14 May 1985). It is estimated that the Donkin project will create 900 new jobs (Ibid).

In 1985 - 86 Devco was back in a loss position (about $16 M CDN). This was due in part to the closure of one of the three mines, which was gutted by fire in April 1984. The Corporation not only lost the output from the burnt-out mine, but also had to bear the cost of providing alternative employment or redundancy settlements for the miners who had worked there (Cape Breton Development Corporation, 1986). Undoubtedly, if not shouldered by Devco, this labour adjustment burden would have fallen on other Federal government programs, whether unemployment insurance or regional assistance.

Also, a further 10% reduction in absenteeism and 8% decline in accidents were realized in 1985/86 (Ibid.). In March 1987, Devco announced that it had signed major delivery contracts with companies in Brazil, Italy, West Germany and Sweden. The Brazilian and Swedish deals together could lead to purchases of about half a million tonnes of coal, almost 25% of current output (Globe and Mail ROB 14 Mar 87, p. B3).

While some efficiency gains and modest market expansion have occurred at Devco, the decision to expand mining operations, and add an entirely new mining facility represents a reversal of the government's previous commitment to reduce the Cape Breton community's dependence on coal mining. While investment plans were premised upon increases in the price of coal in the early 80s, it is unlikely that demand and price will be sustained in the future at such levels as to make Devco's coal operations profitable. Increased dependence on coal in Cape Breton is likely to only perpetuate dependence upon government subsidies.

(iii) Textiles, Clothing, and Footwear

Trade restrictions have been the major form of government response to decline in the textile, clothing and footwear industries (see previous chapter). Subsidization has been directed ostensibly at funding modernization necessary for firms to regain competitiveness, with a view eventually to eliminating what were supposed to be temporary trade restrictions (the MFA). However, in Great Britain, France, Sweden, and Canada, subsidies have also performed an employment maintenance role, at odds with modernization objectives which require replacement of labour by capital-intensive technology. Japan has used subsidies to induce partial exit from the industry, but for modernization goals as well. As the OECD notes, none of the industrialized countries has adopted a strategy of outright exit, hence accepting as inevitable "the shift of large segments of low capital-intensive and highly unskilled labour-intensive industries to the NICs and LDCs" (OECD, 1987c; p. 7).

As there is a paucity of discrete data concerning subsidy programs and sectoral strategy for the footwear industry alone, we have focused below on textiles and clothing. Where programs apply to all three industries (as is the case with the Canadian IBRD subsidies) we have attempted to indicate this in the text.

Britain

In Britain, the goal of subsidization policy has long oscillated between employment maintenance and modernization and concentration of the industry. Throughout the 1960s and 1970s, government aid focused on financing conversion of the industries to high technology, and diversion of production away from specialization in fashion/clothing towards mass production of raw textiles (Hartman, 1985). From the mid 70s to the early 80s, the principal form of assistance became wage subsidies, aimed solely at maintaining jobs (Shepherd, 1983; p. 45). In 1985, the government established a new four-year 20 M Pound scheme to fund investment by small and medium sized firms in textile, clothing and footwear sectors in high technology equipment--which may result in some firms surviving, but will unquestionably lead to major job losses (Hartman, 1985).

France

French policy was oriented to wage subsidies in the 1950s and 1960s, which managed to preserve a large number of small family-owned firms into the 1970s, but which, as Mytelka argues, created a major disincentive to invest in labour-saving modernization. However, in the 1970s the policy emphasized grants to finance mergers of smaller firms, with a view to capitalizing on mass-production techniques and eliminating excess capacity (Mytelka, 1983). While several major enterprises emerged as relatively competitive, output and employment fell considerably in the late 1970s (OECD, 1983c). In clear contradiction with the strategy of modernization and contraction of the industry, the 1981 French Plan for textiles included a direct production/employment subsidy in the form of a reduction of the employer's social security contribution in return for a commitment to maintain jobs (OECD, 1987c; p. 67).

Canada

From 1955 to 1982, employment in the textile industries declined about 14%. The number of firms in the industry actually increased somewhat in the same period, from 977 to 989 (Trebilcock, 1986; pp. 76 - 77). Ahmad notes that:

> "the major part of employment declines, ..., is due less to falling domestic production and more to up-grading of skill requirements due to change in capital-intensity, and the fact that new jobs do not go to workers displaced as a result of the change in production methods" (Ahmad, 1988; p. 100).

Indeed, labour productivity grew between 1971 and 1982 at an average of 2.4% per year (Ahmad, 1988; p. 57). Increased imports, by contrast, have contributed in the 1978 - 1987 period only by a factor of 8% to employment declines (Ahmad, 1988; table, p. 52). The age and skill levels of workers in the industry have resulted in relatively lengthy periods of unemployment following redundancies in the industry (Glenday and Jenkins, 1981).

While some aids were provided previously (mainly regional assistance), a strategy of subsidization for the Canadian textile industry only emerged in 1970 with the establishment of a Canadian "textile policy." The core of the policy was to continue to protect the industry by trade restrictions, while providing labour adjustment assistance (to help displaced workers find jobs in other sectors) and investment grants for modernization, so that eventually protection could be reduced or eliminated (Ahmad, 1988). In 1981 administration of these programs was consolidated in the Canadian Industrial Renewal Board (CIRB). The costs of the CIRB are summarized in Table 2, *infra*.

This complex of programs (aimed at creating jobs in other sectors in communities hard hit by declining textile employment) was expected to create about 5200 manufacturing jobs between 1982 to 1988 -- the subsidy cost per job to average around $18,000. Significantly, however, an independent review of the effectiveness of the program found that a subsidy of 25% less would have been sufficient to create the same number of jobs (Price-Waterhouse, 1986). Modernization assistance has been little more than a means of sustaining firms and creating temporary employment; even the recipients admitted that the modernization projects did little to improve the international competitiveness of their firms (Ibid., p. 63). Moreover, it appears that two thirds of the projects would have been undertaken eventually even without subsidy.

Furthermore, although one of the distinctive features of the CIRB's program was to aid the stronger and larger firms in the industries -- i.e. to create "winners" rather than perpetuate the existence of "losers"-- there is no conclusive evidence that in fact the program has had that effect (Price-Waterhouse, 1986; Ahmad, 1987). One reason may be that the low cost of entry for new small firms militates against the strategy of concentration -- the would-be "winners" are constantly faced with competition from new entrants in the market, and so even preferential government subsidy policies cannot ensure for them a stable or growing market share.

Sweden

Until the 1970s, Swedish policy was not to intervene in the textile industry, which was undertaking its own process of modernization and employment reduction. More recently, the Swedish government has provided massive wage subsidies in the face of rapidly declining demand. Between 1971 and 1982 subsidies in total amounted to about 140,000 S Kr per worker. While costly, these measures did little to halt the rapid decline in employment--from 132,000 in 1964 to 18,200 in 1982 (OECD, 1984). They have also managed to completely neutralize any positive effect of Sweden's modest modernization program (worth 20 million S Kr). With output falling faster than employment, labour intensity has actually been increasing in the industry in the 1970s and 1980s (Herin and Haltunen, 1983, p. 7).

West Germany

While the German textile industry's survival was in question at the beginning of the 1970s, two decades of rationalization, technological innovation, and specialization in capital-intensive segments of the market have produced a remarkable recovery. While capacity declined between 1970 and 1983 by about 1.2% per year, sales per worker increased from DM 71,000 in 1970 to DM 122,000 in 1983. The percentage of product exported almost tripled in the same period while employment was halved from 500,000 to 236,000. In recent years, there have not been further declines in employment, despite the absence of subsidy, suggesting that Germany has ended up with a viable, modernized industry at lower but relatively stable levels of employment. This, of course, has been the purported but unachieved goal of much subsidization in other countries.

West Germany's extraordinary success is due to several factors: a) earlier rationalization than in most of the other countries; b) a lack of production or wage subsidies to retard adjustment; c) a very high level of specialization in capital-intensive products (Hartman, 1985).

Japan

Japanese strategy has focused on a) technological innovation; b) concentration of firms; c) scrapping of capacity. The Textile Industry Rationalization Agency has been providing loans and grants to the industry for new technology since the 1960s. By the late 1970s, however, it became evident that these policies had not been very successful in facilitating positive adjustment, and the Agency's focus has now shifted to R and D. Initial expenditures were small ($.5 M in 1982) but quickly increased, and there is now in progress a $40 M project to build by 1995 a prototype of an almost completely automated textile plant, with on-line linkage to distribution systems (Dore, 1986).

Linked to technological innovation has been subsidization of industrial concentration, since it is considered that new technologies will not be affordable for small firms. Loans have been made available for mergers at preferential interest rates. Up to the present, few mergers have been created by these incentives, although it will be still several years before the major technologies they are intended to make affordable will be available (Dore, 1986). Finally, scrapping of capacity both in the synthetic fibre and cotton and wool textile industries has been accomplished under the 1978 Structurally Depressed Industries Law. Loans have been made available to industry trade associations to buy up surplus capacity and sell it for conversion to other uses; total costs of the program are not available, but it is known that loans for the wool industry amounted to US $ 42 M between 1978-83 (Peck et al., 1986).

In contrast to other sectors, such as shipbuilding, Japan's industry-contraction policies in textiles and clothing have so far not proven particularly effective in inducing positive adjustment (Dore, 1986). It is too early to tell whether the longer-term strategy of total automation will restore some margin of comparative advantage. In any case this strategy-- premised entirely on increased capital-intensivity of protection -- will invariably lead to substantial employment reductions if it does succeed.

(iv) Automobiles

As detailed in the previous chapter, trade protection has been a major instrument of policy response to the rise of Japanese competition in European and North American markets. However, subsidization has also occurred, primarily in the form of bailouts or (in the case of nationalized industries) capital injections aimed at facilitating restructuring of ailing firms. The other two main forms of subsidization have been regional grants and loans to influence location of new plants and to ensure that plant modernization occurs rather than closure, and R and D funding. The incidence of these subsidies in recent years is summarized in Table 3.

The three major bailout/recapitalization exercises of the 1980s-- British Leyland, Chrysler (USA and Canada), and Renault -- have all achieved their objective of putting the firms back on the path to profitability, although rationalization has involved in most instances major employment reductions, and in some instances, wage cuts for workers.

Britain

In the case of British Leyland (nationalized in 1975), capital injections of over 1 billion pounds in the late 1970s as well as an ambitious restructuring program failed to revive the firm--partly due to the militant unions' success in forestalling plans for employment reductions and work force restructuring. In 1977, Sir Michael Edwardes was appointed Chairman of BL, and proceeded immediately to close down outmoded plants, limit wage increases, and rationalize employment structures, which had been held hostage to an anachronistic division of the workplace among different unions (Dyer, Salter and Webber, 1987). Between 1978 and 1983 employment was reduced by 25,000, product lines were streamlined, and in some plants worker productivity nearly tripled (Ibid.). As a consequence, in 1983 BL showed its first profit in a decade. Since then the Jaguar division has been privatized, and the remaining Rover enterprise continues to achieve productivity gains.

United States

The bailout of Chrysler involved Federal government loan guarantees of \$1.5 billion, in return, however, for concessions from all the major actors (workers, state and local governments, creditors) who stood to lose if Chrysler went bankrupt. Reich estimates the concessions totalled about \$2 billion. Their distribution is shown in Table 4.

Within two years, Chrysler was again profitable, and in 1983 paid back in full the federally guaranteed loan. Rationalization of the firm, however, involved not only new product lines and joint ventures with foreign producers but also major employment cuts--employment fell from 121,800 in 1979 to 83,900 in 1985 (Ibid.). These cuts were cushioned by disbursements of Trade Adjustment Assistance (TAA) to workers by the Federal government. Claims by redundant auto workers are considered largely to account for the increase in TAA claimants from 131,722 to 388,265 over one year, of which former Chrysler workers constituted a significant proportion (Aho and Baynard, 1984; pp. 179 - 80). Workers did not fully recoup the wage cuts and fringe benefit deferments that were conceded as part of the restructuring, although the firm's profits soared to \$2.5 billion in 1984. Similarly, Chrysler's creditors have never been fully compensated for the concessions they made to facilitate the bailout.

Canada

As noted by Trebilcock et al., the Chrysler bailout in Canada had a somewhat different character--rather than being contingent on concessions by creditors or restructuring of Chrysler's Canadian operations, the government loan guarantees were instead linked to promises to maintain employment levels (Trebilcock et al., 1985 pp. 285-286). Although the $170 million in Canadian loan guarantees were never used, they were an essential condition of Congressional approval of the U.S. bailout (Reich, 1985, pp. 183-185).

France

Between 1982 and 1985 the French government provided $800 million in capital injections to Renault -- over those three years, the firm accumulated 25 M FF in losses, and 60 M FF in debts. (L'Express, 25 July 1986). After a government policy review in 1984, continued public support to the industry was linked to major reductions in employment and investments in modernization. Renault embarked on a program of restructuring which involved job cuts amounting to about 1/3 of the workforce, despite militant union opposition. It also sold off to Chrysler in 1987 its troubled American subsidiary, AMC. As a consequence of these changes, over the last three years losses have been reduced from about 12 billion FF to about 5 billion (estimated) in 1986 (Economist, 11 Oct. 1986) and the firm is expected to break even in 1987.

(v) Steel

The steel crisis of the mid-seventies gave rise to extensive use of subsidies, in addition to trade protection and, in the European Community, temporary cartelization.

France

The nationalization of France's ailing steel giants Usinor and Sacilor in 1983 was the culmination of a long-standing tradition of government intervention in and subsidization of the industry. As Priouet remarks, "this very special industry linked by its origins with the aristocracy, privileged and protected in its activities, was never fully subjected to the stern laws of competition." (Priouet, 1963). The general rate of industry-specific subsidization in the post-war period (until the massive interventions following the crisis of 74-75) has been estimated as between 25 and 30% of production costs (Goldberg, 1986; Hayward, 1986). Subsidies included bounties on coking coal for the domestic industry and special, high prices in government contracts, in return for guarantees from the industry to sustain certain employment levels, as well as grants for research and development (Levy, 1986). The French Government augmented subsidization in 1967 with a plan to modernize and expand the industry, assuming 30% of the capital costs of renewal, with loans and grants totalling about $1.5 Billion CDN from 1967 to the early seventies (Hayward, 1986).

The result of the plan was little short of disastrous, because its primary focus was on increased output, and as Goldberg notes, "the new capacities were ready to be put into production when the crisis came in 1974." (Goldberg, 1986; p. 141). The French Government had premised the subsidized expansion on increased demand of 1.9-3% between 1974 and 1979, whereas demand actually declined 17% in that period (Hayward, 1986). Since 1978, the French government has changed direction, tying subsidization to a plan to increase productivity while reducing employment and output. Between 1978 and 1985 state aid totalled 60 Billion FF (ibid.). Even Goldberg, who claims that the 1978 programme did result in "good progress towards productivity" and that "some of the steel works today come close to Japanese and German productivity levels", acknowledges that this was achieved at a high price (Goldberg, 1986). However, many of the productivity gains came not from actual modernization but rather from reduction of employment from 160,000 in 1975 to 97,000 in 1981. All predictions are that further massive losses will occur in the industry, which the state will have to bear, and that capacity will continue to be reduced (Economist, April 7, 1986).

Sweden

Demand for Swedish ordinary (i.e. non-specialty) steel fell 30% between 1974 and 1977, which made "thoroughgoing structural changes inevitable" (Hook, 1982). The government facilitated a merger of the three major steel makers and acquired 75% of the shares of the newly formed conglomerate. Between 1978 and 1981, the government had invested 5,500 Million S Kr in the industry, with a view to modernization. But government intervention was also tied to shrinking of capacity, and the labour force was reduced by about 20% (Hook, 1982).

Pointing to this reduced capacity and also to the fact that by 1983 the company was making a profit, the OECD considers the Swedish programme to be a model of how "governments can act as a (rather) successful private entrepreneur." (OECD, 1987a; p. 28). However, one Swedish economist claims that subsidies actually retarded creation of new jobs elsewhere. By keeping wage rates artificially high, subsidies made it more costly to hire people away from the industry, and led to less growth in the labor supply elsewhere, keeping up wage rates in general (Carlsson, 1983).

The government also intervened to aid the specialty steel sector, which constitutes 70% of Swedish steel production and which in contrast to the ordinary steel industry, is largely privately-owned. In 1978 and 1979 the government provided 1.3 Billion S Kr "in the form of loans and guarantees for investments needed for restructuring purposes" (Hook, 1982), resulting in an industry "with more up-to-date equipment and a technology capable of meeting demand for higher quality steel for advanced purposes" (Carlsson, 1983). Ballance and Sinclair note, however, that one effect of the government-aided streamlining is that the many small firms in the industry are now increasingly competing with one another for a relatively limited national market share, with a consequent increase in the incidence of bankruptcies--an unintended (although not economically undesirable) consequence of public aid (Ballance and Sinclair, 1983; p. 121).

Britain

It is estimated that between 1975 and 1982 the nationalized British Steel Corporation (BSC) absorbed about 7 Billion Pounds in public funds (Goldberg, 1986; p. 147). Although significant reductions in employment have been achieved as a condition of continued assistance (60,000 positions cut between 1975-1980; Goldberg, 1986), little of the massive assistance has been channeled into modernization; while Cockerill and Cole see some modest increase in labour productivity, they note that many mills are still plagued by outmoded and inefficient work practices, and severe difficulties with technological innovation (Cockerill and Cole, 1986). The OECD view is, however, more sanguine: it estimates that between 1980 and 1983, labour productivity at British Steel rose by more than 40%, "partly due to widespread plant closures, but also helped by bringing working practices into line with modern technology" (OECD, 1985a; p. 102). In any case, by late 1986, BSC did appear to be breaking even, although this was partly a consequence of continued paper restructuring of assets and liabilities, and further redundancies (which add social costs of unemployment to the subsidy bill the government has already footed).

The United States

In the United States, response to the decline of the American steel industry has come primarily in the form of trade protection, not subsidies. Nevertheless, Magaziner and Reich note that between 1975 and 1979, about $45 Million per year was provided in trade adjustment assistance to workers (Magaziner and Reich, 1982; p. 253). Also, as of 1980 there were about $393 Million in loans and loan guarantees to the industry outstanding (ibid.). In addition, the Reagan Administration has adopted a conscious policy of not fully enforcing environmental regulations, which results in an estimated subsidy of $10 per ton of output (Goldberg, 1986; p. 176).

It is hard to find a recent study fo the United States steel industry that does not consider some form of subsidized restructuring to be preferable to continued and increasing trade protection (Hirschorn, 1986). A summary of proposals for subsidized renewal is contained in Table 5.

The industry itself tends to place trade protection, not subsidization for restructuring, at the top of its list of demands from government (Hirschorn, 1986). It also complains about the regulatory burden imposed by pollution control standards, but pollution control-driven expenses constitute a small part of total input costs and their reduction would not substantially enhance the international competitiveness of the industry (Crandall, 1986; Adams, 1985).

(vi) Summary/Evaluation

Since the early 1960s, there has been a dramatic growth in the use of domestic subsidies among OECD nations, initially attributable -- at least in part -- to trade liberalization, but in the 1970s primarily due to crises of surplus capacity in declining industries. (See table on page 19). In almost all countries, in the sectors we have examined, dramatic declines in employment were experienced in the 70s and 80s. These declines have occurred even where government subsidy policy has had as its objective the maintenance of jobs and output (e.g. textiles in Britain). It is impossible to estimate how much faster these changes would have occurred, had subsidies not existed.

What has not happened, despite these declines, is the rapid collapse of major industries -- and to some extent, this is what subsidy policies have been intended to prevent. Despite the combined impact of recession and rapidly contracting demand in basic industries, the basic fabric of social democracy has remained intact in the European countries and Japan; despite the heavy indebtedness of many of the firms in the declining industries, the stability of the financial system has not been undermined; and of course massive political violence and social upheaval have been avoided. As Wilks suggests, the economic role of government in ensuring the stability of the system as a whole is an important one: "unless government acts to maintain stability, business will cease to invest and unions will become hyper-defensive" (Wilkes, 1982, p. 456).

This being said, the respective policies of the various countries to the selected sectors have varied widely in costs and benefits. One factor that differs widely between countries is the rapidity and accuracy with which the nature of industrial decline had been understood. In this respect, the Japanese seem to fare the best. In textiles, shipbuilding, and coal, the Japanese have discerned trends of declining comparative advantage quite quickly--whereas some other countries (France is the best example) only recognized much later that declining demand was not a mere temporary aberration, or that the market forces at play could not be reversed by production subsidies and some modernization.

In the previous chapter, we compared relative adjustment trends in various countries under study with respect to the steel, auto, and textile industries. In the case of coal and shipbuilding, the rapidity and extent of adjustment have also varied considerably from country to country. From 1975 coal production in Japan and West Germany declined at an average annual rate of 1.93 and 1.70% respectively, whereas in France the rate of decline in output was almost twice that figure, and in Britain production actually increased by about 1.03% per year over the same period. In the 1975-83 period, the most dramatic declines in employment were realized by Japan and France (averaging over 3% per year), whereas in the case of Germany and Britain, the rate of decrease was less than 1% per year on average (of course, major employment reductions in the British industry occurred in the 1984-86 period, as detailed above). Productivity increases have been highest between 1975 and 1983 for France and Britain (about 3% per year), but relatively small for Germany and Japan. In the case of Japan, however, this reflects the fact that adjustment occurred much earlier--in the 1955-64 period, average annual productivity increases for Japan were over 16% (Trebilcock, 1986).

In the case of shipbuilding, the greatest declines in capacity have been realized in the 1975-1985 period by countries that have adopted strategies of exit such as the United States, Sweden, Australia and Japan. The case of the United States is the most dramatic of all, with output falling from 5.5 million GRT in 1974 to 450,000 GRT in 1985 (OECD, 1987b). Japanese output fell from 14.75 million GRT in 1973 to 6.998 million in 1984, and Swedish output declined from 2.29 million GRT to 216,000 over the same period. Even, however, countries which have resisted the exit option nevertheless have had to reduce output substantially. In France, for example, output fell from 1.17 million GRT in 1973 to 196,000 in 1984, not quite as dramatic a reduction as in Sweden, for instance, but nevertheless massive (OECD, 1987b). These figures, however, do not tell the full story: in France, employment fell at a much slower rate than output (from 32,500 workers in 1976 to 17,700 in 1985) whereas in Sweden employment declined almost as dramatically as output (from 23,600 workers in 1976 to 3,776 in 1985). This suggests that exit-resisting subsidy strategies are much more successful at maintaining employment than output.

Our study of industrial subsidies confirms the importance of exit subsidies to labour in facilitating efficient adjustment (a phenomenon which we examine in depth in the next chapter). In some instances, governments have learned to use subsidization as a means of "buying off" the political demand for policies which resist market changes -- whereas previously they had used subsidies as an instrument of such resistance. Clear examples of this transformation of subsidy strategy are Swedish steel and shipbuilding policies and the policies of the French and British governments towards their nationalized auto industries. However, in other sectors, market resisting subsidization has persisted; some instances are French, British, and Swedish textiles, and French coal and steel. Notably, these costly market-resisting policies have not been able to prevent significant declines in employment and output in the industries concerned. With the occasional exception (shipbuilding in Sweden and the US; recently, coal in Japan), governments while recognizing the need to adjust have nevertheless avoided adopting strategies of complete exit which accept a permanent, decisive loss of comparative advantage. Instead, they have preferred at enormous cost, to fund modernization and specialization of industries, with the hope of restoring competitiveness by technological innovation and exploitation of market niches. In some instances, such policies, although very costly, have led to renewed competitiveness in world markets (e.g. steel in Sweden). In others (particularly the textile industry) massive gains in productivity (i.e. in the US and Germany), have made industries in some countries competitive, but only within the current framework of trade protection against NIC producers (the MFA).

IV. THE POLITICAL DETERMINANTS OF SUBSIDIZATION AND THE PROSPECTS FOR INTERNATIONAL DISCIPLINE OF SUBSIDIES

(i) The Existing Regime

The GATT rules on subsidies which emerged from the Tokyo round of trade negotiations represent the principal, legally binding internationally agreed constraints on subsidization. On the one hand, almost all of the kinds of subsidies which governments use as a response to industrial decline--regional aids, employment maintenance, R and D, exit and restructuring subsidies -- are recognized in Article 11 of the GATT Subsidies Code. The article states that the signatories "do not intend to restrict the right of signatories to use such subsidies to achieve ... important policy objectives." On the other hand, the Code provides remedies against the use of subsidies, without regard to their benefit or importance to the subsidizing country.

The remedy provided by Track I of the Code is the imposition, under Article 6 of the GATT, of countervailing duties to counter subsidization of the imported product. This remedy is available only against injury to the importing country's domestic industry--thus, for example, if country A and country B both export a product to country C, and A subsidizes its exports, B would not have a Track I remedy against B, even though the subsidization injured B's trade with C.

Track II, by contrast, provides a procedure for reference of a dispute between trading partners concerning subsidization to a GATT committee, which may order "appropriate measures" as a remedy. Unlike Track I, Track II applies to purely domestic subsidies as well, and also to the injury of trade with a third country (the situation between A, B, and C described above). Use of Track II is rare, and it is questionable whether Track II action ever resulted in a substantive limitation on a subsidy policy. While the GATT rules themselves provide no clue as to how to balance the legitimacy of domestic subsidization to achieve important policy goals against the negative impact on other countries' trade, Track I allows a unilateral determination that a subsidy is countervailable, and of course a unilateral remedy. Only export subsidies are explicitly prohibited by the GATT Subsidies Code.

The main effect of the GATT subsidies rules has been to encourage trade retaliation against subsidies which the injured states themselves find illegitimate. This retaliation has been exercised largely by the United States, where domestic trade laws provided for countervailing duties against subsidized imports long before the existence of the GATT Code. Between 1980 and 1984, the US initiated 123 CVD actions, as compared to 8 by Canada, 6 by the European Community, and 1 by Japan (Hufbauer and Erb, 1984; p. 16). There is little evidence that use of CVDs has provided any deterrent against subsidization. What it has done is to fuel the growing political market for protection in the US. As Horlick, Quick and Vermulst remark, "the Subsidies Code enhances reactions against all kinds of assistance to industries, reactions which can be used as important barriers, particularly in times of high dollar rates, economic recession or high trade deficits." (Horlick, Quick, and Vermulst, 1986; p. 1).

The argument that CVDs correct or neutralize the distortion of trade caused by subsidies is highly questionable. For one thing, it is very unclear which domestic subsidies cause a distortion. As Barcelo argues, subsidies which correct market distortions or address externalities are treated no differently under the CVD rules than any others (Barcelo, 1977). Secondly, subsidization often occurs due to national values and preferences for certain kinds of government intervention; it is unclear why these values and preferences should not simply be considered as another aspect of comparative advantage or disadvantage. Most importantly, responding to a domestic subsidy by a tariff is very likely to reduce net economic welfare. Consider the following example evoked by Barcelo:

> ". . . even if we start with an assumption that the wage subsidy is inefficient within Utopia, it does not follow that the United States would improve its own efficiency (expand its consumption possibilities) by countervailing against subsidized Utopian shoes. An inefficient subsidy in Utopia could of course have negative consequences for the United States. The misallocation of

> resources to shoe production in Utopia would generate higher costs and higher prices for some other Utopian product, for example, widgets. If the United States is an importer of Utopian widgets, it will be hurt by the higher widget prices. But is a countervailing duty the proper remedy for such harm? If the new American duty does not induce Utopia to abandon its wage subsidy, American consumers and intermediate producers will have the worst of both worlds: higher prices for Utopian widgets and higher prices for Utopian shoes." (Barcelo, 1980).

An examination of the use of CVDs under U.S. trade law discloses that even though the process used is adjudicative and supposedly impartial, decisions tend to reflect ideological bias much more than any well-defined economic logic. For example, tax concessions are exempted from the definition of countervailable subsidies, because the U.S. jurisprudence considers them to actually reduce rather than increase government intervention. Yet in terms of economic theory it makes no difference whether government reduces the costs of an industry or firm by a benefit or relief from a burden. This logic has to some extent become apparent to the present U.S. Administration, whose tax reform proposals recognize firm and industry-specific tax relief as wasteful subsidies, and seek their elimination in favour of lower overall rates of taxation (Peters, 1986). Yet at the same time, the Administration has taken up regulatory relief, i.e. from pollution control standards, as a response to declining industries without considering it as a production subsidy.

Nor, despite its major effects on employment and output in manufacturing, is defence spending deemed to contain an element of subsidization, but as Markusen argues, "Military spending operates a disguised sectoral policy in two important ways. First, it acts as an intermediate-run stimulant, filtered predominantly through the manufacturing portion of the economy. Second, it serves as a long-term planning strategy, both by encouraging innovation in certain product lines and by bolstering the balance of payments by a distinctive specialization in arms trade." (Markusen, 1985; p. 73).

The recent softwood lumber case is indicative of a trend in U.S. trade policy to consider as subsidization the setting of resource rents at rates below those which would maximize short term profit for the government owner. However, as a Committee of the American Bar Association has pointed out, this not only assumes that the appropriate behavior of government with respect to resource management is that of a private profit-maximizing company, but that also "only one market strategy is available to a private company -- that of maximizing short term profits". (American Bar Association, 1986; p. 299).

In the British Steel case, U.S. steel producers sought countervailing duties on British steel imports, claiming that both equity injections by the British government and labour adjustment assistance provided to help the industry reduce employment and capacity, were injurious subsidies. The American International Trade Court held that "to the extent in any year that the government realized a rate of return on its equity investment in the British Steel Corporation which was less than the average rate of return on equity investment for the country as a whole its equity infusion is considered to confer a subsidy" (605 F Supp. 286(1985) at 291). This of course assumes that a private, purely market-driven investor would never put money into company that did not realize every year at least the average rate of return--an economically irrational caricature of market economies where many investments are made with the expectation that after perhaps several years of losses a compensating rate of return will be realized.

(ii) Proposals for Reform

Use of the Subsidies Code to expand trade protection, combined with its apparent impotence to restrain subsidies themselves, have led to various proposals for reform of the rules. One direction of most of these proposals is that specific international legislation should be introduced, spelling out in detail what kinds of domestic subsidies are permitted, and which not, and also, of course, providing the definition of subsidy which proved so elusive at the Tokyo Round. Barcelo suggests, for example, "perhaps through a series of special agreements or annexes to the Subsidies Code, the GATT countries could develop a set of rules and principles for subsidies broadly similar to those of the European Community" (Barcelo, 1984; p. 26). Diebold has suggested that a 1975 OECD statement on the broad orientation of industrial policy be taken as an international agreement suggesting guidelines as to which subsidies are permissible and impermissible (Diebold, 1980; pp. 81-83).

There are several reasons why such substantive restrictions on subsidies and subsidy policy are unlikely to be feasible at this juncture. The first is that the consensus on what is a subsidy and which subsidies are distortive or corrective of markets, or otherwise permissible or impermissible, is more elusive than ever. As shown by the examples above, the American view of subsidization has increasingly been shaped by an ideological paradigm of government-industry relations accepted almost nowhere else in the industrialized world.

Yet the United States is not the only difficulty in achieving consensus. What Martin Wolf has described as "conflicting ideologies of adjustment" persist among the other GATT signatories as well. Differences in national policy preferences have been so accentuated within the European Community itself that EC limits on subsidies have proven highly ineffective. Through a long series of clarifications and interpretations throughout the years of industrial crisis--the 70s and early 80s--the EC has essentially given up on the theoretically quite strict limits on state aids in the Treaty of Rome itself. In the early 70s the EC was still attempting to implement strict controls on subsidization; by contrast, the new policy which emerged in 1979 (while reiterating the earlier ideals of discipline) "is notable for a softening of tone notably in respect of the need for a breathing space before longer term solutions can be worked out" (Swann, 1983).

Lauber has suggested that "conflicting ideologies certainly played an important role" in the impasse which the European Community experienced in its efforts to develop a common position on industrial policy--not only differences in "ideological traditions which vary from country to country" but also between ruling political parties." (Lauber, 1984; p. 43). The ideological problem is, of course, much more acute when extended beyond the EC to all the GATT signatories.

A further difficulty is with the nature of restrictions proposed by those who seek substantive international legislation. It is often proposed that subsidies should promote, not retard, adjustment, a criterion reflected in both OECD policy statements and in various attempts at EC guidelines. The difficulty is that most subsidies to declining industries are promoted as facilitating positive change, whereas in many cases, as we have seen in our empirical survey, they end up retarding change. This is not simply a case of the dishonesty of politicians -- often what will have a positive effect is difficult to predict in advance. Moreover, consider the experience of the EC with its attempt to abolish aids to the steel industry, apart from those aimed at positive adjustment or regional policy. There is no evidence that subsidization decreased, yet it is possible that more of it has been recently funneled into the permissible, regional programs.

There is an even more fundamental contradiction in the attempt to curb subsidies by sovereignty-limiting devices. Subsidies are among the most potent tools for protecting employment and indeed political legitimacy in times of economic crisis. As Lauber suggests, "it becomes problematic to turn over one's industry to the discretion of an international (or supranational) organization. To do so may even go against the first duty of a nation-state which consists in protecting its own citizens -- their welfare, their employment, their security, their life chances generally." (Lauber, 1984, p. 43).

In 1976 the OECD achieved agreement on guidelines for mutual reduction of the escalating subsidies which member states had been providing to shipbuilding, yet when the acute crisis in world demand hit a year later, these were simply ignored by most countries, on grounds that an emergency existed (Mottershead, 1983; OECD, 1987b). The achievements of the GATT Kennedy Round are often cited as an example of how nation-states can achieve a sacrifice of short-term political interest for longer-term mutual economic interest (Keohane, 1985; Ikenberry, 1986). Yet the GATT itself contains "escape" clauses, and when world economic conditions became precarious signatories did not hesitate to resort to protectionist measures even more costly than subsidies (such as quotas and VERs) to defend short-term national political and economic interests.

This leads to a final, serious defect in the strategy of substantive international discipline of subsidies, particularly in the case of declining industries. Political pressure on governments to assist these industries is often intense, and subsidies may be an alternative to even more costly and distortive practices such as tariffs, VERs, and quotas. Assuming restrictions on subsidies were to work, they might well have the effect of channelling more of the demand for intervention into these other, even less desirable polices.

(iii) Towards An Alternative Approach: Mandating Transparency in the Domestic Policy Process

In essence, subsidies benefit special interest groups in the economy which are adversely affected by economic change, by shifting the costs of this change onto taxpayers at large. If the general community rejects these costs as unacceptable or too high, governments stand to lose rather than gain politically from subsidization -- the marginal votes gained among the special interests will be outweighed by those lost through community disapprobation. Governments thus have a political interest in minimizing the visibility of the costs of subsidization to the community at large, by burying them in domestic policy-making procedures of a fragmented or informal character, where those directly benefitted have input into bureaucratic and political decision-making while there is little role for multi-party or broad community debate on costs and benefits of subsidization. As Olson remarks, "just as lobbies provide collective goods to special interest groups, so their effectiveness is explained by the imperfect knowledge of citizens, and this in turn is due mainly to the fact that information and calculation about collective goods is also a collective good." (Olson, 1982; p. 26).

While certainly feasible for professional economists, calculating the subsidy element in domestic policies such as loan guarantees, nationalization, equity injections, and regulatory relief is rarely an easy task for ordinary participants in a public debate. Politicians and bureaucrats can easily hide or downplay these costs in their presentation of programs. Here also, the ideological biases we have described above come into play: regulatory relief or nationalization may not be considered as subsidies at all, depending on national prejudices.

It follows that more complete information and especially more widely distributed information about the costs and benefits of subsides, while it may not lead to elimination of subsidies altogether in many cases, will lead at least to a tendency to choose less over more costly options. For example, one trend which runs through the practice of subsidizing declining industries that we have examined in this chapter is that subsidy programs have been premised on frequently over-optimistic estimates of the benefits of the program or of the industry's prospects for recovery. This is not particularly surprising, since the analysis is usually generated from within the industry itself or from bureaucrats with their own stake in a particular industrial policy.

One means, therefore, of influencing domestic subsidization policies in a more cost-efficient direction would be domestic and international measures to ensure that agencies removed to some extent from the political process can compile comprehensive data on the costs and benefits of subsidy policies, make that data public, and conduct an ongoing review of whether policies are achieving their stated objectives. The specific character of such measures is considered in detail in the concluding chapter of this study.

Table 1

Measures of assistance to OECD shipbuilders

	State ownership	Tariff protection	Exemption from or rebates of taxes and duties	R & D support	Direct production subsidies	Home credit and assistance to shipowners	Export credit schemes
Denmark			imported materials duty free: ships exempt from VAT	$0.5 m p.a.		80% over 14 years at 8% interest: 4 year moratorium	Danish Ship Credit Fund, at agreed OECD rates
France			imported materials duty free: ships exempt from VAT	very small	15-25% depending on size of yard, type of vessel	interest rate subsidies at OECD export rates: grant of equity capital to owners	Commercial Banks, at OECD rates, plus Bank of France
Italy	c. 90% of capacity		imported materials duty free: ships exempt from VAT	3 m lire p.a.	up to 30% (E. Commission to investigate)	70% of contract price loaned by state: state also pays half interest costs	in line with OECD rates
Japan		6% duty on ships less than 100 grt		1.8 b yen 1979 Ship Research Institute, also J. Nuclear Ship Dev. Agency		JDB loans for 65-75% cost over 13 yrs, 3 yr moratorium: 2½-3½ subsidy for modern vessels	Export-Import Bank plus commercial banks, at OECD rates
Netherlands	partial state ownership in a number of yards		imported materials duty free: ships exempt from VAT	small grants	funding of losses in connection with restructuring, up to 75%	interest subsidies to a maximum of 2% below OECD export rates	transitional interest benefits allow rates not more than 2% below OECD agreed levels
Norway	one yard c. 5% of capacity		customs rebate of 6% for new ships, 4% for repairs: ships exempt from VAT	15 m N Kr 1980	up to 18%	loans up to 80% over 12 yrs with 3 yr grace period	Export finance A/S OECD agreed rates
Spain	three yards c. 60% of capacity	14% tariff (10½% with EEC) plus hard to obtain licence	5½% customs rebate for domestic ships (less for exports), 12½% indirect tax rebate prior to VAT		up to 9.5%	loans up to 80% at 8% with up to 2 yrs moratorium	commercial banks and Banco Exterior of Spain
Sweden	Swedyard own most capacity c.90%		imported materials duty free: ships exempt from VAT	12 m Sw Kr 1979/80	Swedyards funding of losses	loans up to 70% over 12 yrs plus depreciation loans up to 25%	Swedish Export Credit Board OECD agreed rates
UK	British Shipbuilders own all capacity		imported materials duty free, 2% tax relief for indirect taxes: ships exempt from VAT	£0.5 m 1978/79	Shipbuilding Intervention Fund up to 30% plus funding of BS losses	loans at OECD export terms plus interest moratorium up to 3 yrs	commercial banks plus Dept. of Industry OECD agreed rates
US		foreign built ships cannot engage in coast-wise trade		$19 m 1978	Construction Differential Subsidy up to 50% of domestic cost	up to 87½% over 25 yrs 6-8%	

Source: Compiled from OECD (Working Party No. 6 of the Council on Shipbuilding): Measures of Assistance to Shipbuilding in the Member Countries (C/WP6(79)S3 [Final], Paris, 1980

Table 2

FEDERAL GOVERNMENT ASSISTANCE TO THE CANADIAN TEXTILE, CLOTHING AND FOOTWEAR INDUSTRIES

Government Assistance Programs
(million dollars)

Program	Objective	Type of Assistance	Expenditure by Sector Textiles Clothing Footwear	Total Expenditure Textile Clothing, Footwear
CIRB Canadian Industrial Renewal Board 1981-1986	promote the revitalization and international competitiveness of the TCF sectors	loans, loan insurance, contributions to consulting costs and capital expenses		274.7 (SFP and LAP)
----SFP Sector Firms Program	promote restructuring and modernization		120.20 80.10 22.80	223.10
----LAP Labour Adjustment Program	provide assistance to workers affected by foreign competition in the TCF sectors	wage subsidies, mobility assistance enhanced training allowance incentives	.... 51.60	51.60

From Ahmad, 1987

Table 3

GOVERNMENT ASSISTANCE TO THE AUTOMOBILE INDUSTRIES IN SELECTED OECD COUNTRIES 1975-1985: SELECTED FIRM-SPECIFIC SUBSIDIES

France					
Eve research project	1981/85 PSA/Renault	FF	560m	$	62m
FIM modernization loans	1984/85 PSA	FF	2 700m	$	300m
	1984/85 Renault	FF	2 750m	$	306m
Capital Injections	1975/80 Renault	FF	1 520m	$	169m
	1982/85 Renault	FF	7 200m	$	800m
	1986/87 Renault (projected)	FF	15 000m	$	1 670m
Germany					
Auto 2 000 research project	1980/84 VK/DBenz/ Berlin V.	DM	148m		50m
U.K.					
Capital injection	1978/83 BL	£	2 009m	$	2 612m
Regional & other grants	1976/83 Ford	£	158m	$	205m
	1979/82 PSA	£	59m	$	77m
	1979/83 GM Vauxhall	£	25m	$	33m
	1988/91 Nissan (projection)	£	112m	$	146m
U.S.A					
Loan Guarantees	1981 Chrysler	$	1 500m	$	1 500m
Canada					
Grants	1985/86 AMC	$	120m	$	164m

Notes: $ amounts calculated at 1985 exchange rates.

Warning: This Table is included for illustrative purposes only and is in no way a comprehensive summary of state aid to the motor industry.

Source: K. Bhaskar, State aid to the European motor industry, East Anglis University, 1984, and press cuttings.

Table 4

CONCESSIONS MADE BY OTHER PARTIES AS CONDITIONS FOR U.S. GOVERNMENT BACKING OF THE CHRYSLER BAIL-OUT

Concessions Agreed by July:
$2.6 Billion

Suppliers and dealers (3%)

Sales of Assets (24%)

Employees (35%)

Other governments (14%)

Lenders (24%)

From Reich, 1985

Table 5

SUMMARY OF PROPOSALS FOR GOVERNMENT-ASSISTED ADJUSTMENT IN THE U.S. STEEL INDUSTRY

Features of four federal options for increasing capital formation in the domestic steel industry

Federal Option	Government cost	Administrative burden	Bias against small firms	Promotion of new technology	Applies to steelmaking only
Accelerated depreciation					
Jones-Conable	High	Low	Yes	No	No
Certification of necessity	Moderate	Low	Yes	No	Yes
Investment tax credit					
Increase capacity	Moderate	Low	No	No	Yes
Modernization	Moderate	Low	Yes	No	Yes
Innovation	Moderate	High	No	Yes	Yes
Loan guarantee					
Increase capacity	Slight	Moderate	Yes	Yes	Yes
Modernization	Slight	Moderate	Yes	Yes	Yes
Innovation	Moderate	High	Yes	Yes	Yes
Subsidized interest loan					
Increase capacity	Slight	Moderate	No	No	Yes
Modernization	Slight	Moderate	Yes	No	Yes
Innovation	Slight	High	No	Yes	Yes

Source: Office of Technology Assessment

From Hirschorn, 1986

I. INTRODUCTION: ECONOMIC CHANGE AND EMPLOYMENT

Economic change proceeds through both the destruction and creation of jobs. Although the net effect of economic adjustment is to increase aggregate national welfare, it is also clear that change creates losers. In the past two decades economic change has been a discontinuous process in which employment in growth sectors has not necessarily compensated for job losses in the contracting ones. The creation of new jobs has not always kept pace with the decline of jobs. This is especially a problem when the displacement process derives from rapid external shocks. New jobs may also require different skills or may occur in different locations than the old ones. Beyond these imbalances in the process of change, labour adjustment problems have been exacerbated by the regional concentration of many declining industries, as well as by the poor overall economic performance that has troubled many OECD countries. Positive adjustment involves efforts to encourage the shift of labour to activities in line with their comparative advantage and relative prices reflecting international competitive developments. [OECD, 1983, p. 9] The focus of this chapter is on the ways in which political decision makers in industrialized countries have used labour market policies in dealing with adjustment pressures. We will describe the major types of labour market policy instruments and evaluate them against economic, ethical and political perspectives. Then we profile and compare the principal labour market adjustment strategies followed in Australia, Britain, Canada, France, Japan, Sweden, the U.S. and West Germany. In the final section we attempt to identify those labour market policies that allow governments to cushion the impacts of change while promoting adjustment and growth.

Pressures for adjustment come from various sources including trade liberalization, technological change, shifts in demand and alterations in the international patterns of competition. For the most part there are continuous labour adjustments as businesses go through a life cycle. Workforce displacements at any one time may seem large but they are often offset by the number of new jobs in expanding firms. However, throughout the 1970s and into the 1980s, in the midst of the overall increase in unemployment, massive labour shedding has taken place in many hard-hit industries. For example, between 1972 and 1980, 400,000 jobs in the steel industry were lost in the OECD nations. This represented some 20% of employment in the steel industry (OECD, 1982). From 1973 to 1981, Germany, France and the U.K. lost about one-third of their 1973 textile labour force, while in the U.S. the labour shrinkage in textiles for the same period was almost one-fifth. (Shepherd, 1984, p. 31). In Japan between 1973 and 1980, employment in the world's largest shipbuilding industry dropped from 274,000 to 157,000 (McKersie and Sengenberger, 1982). During the severe slump in the auto industry from 1978 to 1980 in the U.S., an estimated 217,000 permanent jobs were lost. Table IV-1 shows the magnitude of the curtailment of production and employment in several sectors.

Adjustment occurs when workers who lose their jobs because of a firm's decline move to other firms that are expanding. To the extent that new jobs are not immediately available, or are not seen to be available, potential losers have often sought to resist economic change and to shield themselves from the costs of change. Major employment dislocations that inflict economic and social damage upon workers, firms and communities have made labour adjustment a crucial political issue, as the losers from change have looked to government to cushion them from the negative consequences of the market economy or they have resisted the change itself.

A. COSTS OF ADJUSTMENT

Adjustment and attendant economic growth are not without cost. It is the uneven distribution as well as the magnitude of adjustment costs that generate demands to retard market processes. Private adjustment costs are the difference between the worker's situation before the layoff and income after job separation. These costs include not only temporary and permanent income losses but also asset losses and the physical and psychological impact of job loss (Hufbauer and Rosen, 1986, p 31).

Studies of displaced workers have provided some estimates of adjustment costs of laying off workers in industries under severe competitive pressures. Table IV-2 compares the findings of recent Canadian research on the adjustment costs for the average worker. Each of these studies have found that the costs are greater for older workers. They also point to the importance of macro economic conditions for determining the duration of unemployment and hence adjustment costs. [Canada, Labour Force Tracking, 1979; Glenday et al. 1982] Although the economic gains associated with deferring layoffs may in some cases appear to be substantial, these gains must be weighed against the costs to consumers and taxpayers of postponing layoffs by means of tariffs, quotas, and subsidies. The enormous costs per job saved of these measures have been described in Chapters II and III.

Glenday, Jenkins and Evans (1982) give an example of the calculus in heavily protected industries such as textiles and clothing.

> "The economic benefits of delaying the layoff of an average vulnerable job in the Sherbrooke region, is at most 36 percent of a worker's present wage. With 1978 yearly wages estimated at about $11,200, the benefits of maintaining this job over 5 years equals approximately $20,000 in present value terms. The economic cost of protecting such a job in the clothing sector for 5 years by way of trade restrictions amounts to approximately $30,400 in present value terms. Protecting employment by imposing trade restrictions therefore means a net loss to the economy of some $10,400 per job. (p. 6)

Pearson and Salembier (1983) summarize the North American research on labour adjustment costs. Findings from these studies are an important starting point for analyzing government intervention in labour markets:

- Adjustment costs differ considerably by industry.
- Higher adjustment costs are borne by older, more skilled, and higher-wage workers.
- The general level of economic activity is important in determining the duration of unemployment and the subsequent wage, both of which in turn strongly influence adjustment costs.
- The majority of U.S. workers receiving Trade Adjustment Assistance (TAA) benefits experienced temporary unemployment and were recalled to their old jobs.
- There was a major difference in adjustment costs to workers who returned to their initial jobs as compared to those who did not.
- Workers who were not recalled suffered large real earnings losses that were not offset by TAA and UI benefits. (pp. 46-47)

B. THREE PERSPECTIVES ON POLICY

The dilemma for governments in industrialized nations is how to encourage (or at least not hinder) the continual resource reallocation process that is crucial to future economic growth while reconciling the dictates of social efficiency with other widely held values including redistributive justice, job stability and community preservation. Political reality gives greater focus to the problem as mobilized, potential losers may seek to resist changes and to veto socially beneficial policies. In other words, for government policy makers the problem is how to balance the need for economic efficiency with some sharing of the burdens and costs of change.

From an economic perspective, the objective is the relatively simple notion of allocative efficiency, which calls for the unfettered movement of resources to higher valued uses. Within this framework, market failures provide the basic rationale for government intervention. Market failures derived from the inability of the labour market to fully internalize the costs and benefits of adjustment impede displaced workers from moving on to jobs in growing sectors. The most significant failures within the labour market include:

- imperfect and asymmetric information about future changes in patterns of comparative advantage and subsequent employment opportunities which makes it difficult for employees to devise their own adjustment and/or diversification strategies.

- externalities in the accumulation of human capital which may mean that employers underinvest in worker training because the benefits of that training can be appropriated by other employers. Workers themselves may be unable to afford the direct opportunity costs of training. Moreover, employers have an incentive to provide specific training which is less transferable to another employment setting. From the point of view of societal adjustment, this is the least desirable form of human capital (Wonnacott, 1988, p. 25).

- Congestion in the labour market may mean that if there are mass layoffs each worker's search efforts increase the search costs of other workers; these costs are external to workers and employers in the declining firm. And in making a decision whether to relocate in such situations, a worker will value the move less than its value to society. (Gunderson, 1985; Saunders, 1984; Richardson, 1983; Trebilcock et al., 1985).

Distributional effects rather than adverse allocative efficiency consequences are at the heart of the utilitarian and Kantian social contractarian ethical rationales for intervention in the labour market. The utilitarian paradigm which focuses on compensating those who in order for society as a whole to be better off, bear large and unanticipated costs of adjustment, suggests directions similar to neo-classical economics. However, utilitarians evaluating claims for compensation will consider private as well as social costs. Besides these costs, utilitarian policy makers may wish to deal with individual disutilities arising from demoralization due to uncertainty and disaffection within the political system (Trebilcock, 1985, p. 18). Application of utilitarian ethical precepts would often require some form of compensating policies for the victims of change.

A Kantian social contractarian perspective emphasizes a more clearly redistributive order. The social contract framework, like the utilitarian, dictates compensation for private losses due to change but in the social contract case , the compensatory principle is directed specifically toward the least well-off members of society. Thus within the Rawlsian (1971) framework, all displaced workers are not necessarily to be aided. Compensatory adjustment policy is to be directed toward those in society who are least advantaged.

The third of the mainstream ethical paradigms, communitarianism, derives from individual ties to particular communities rather than distributive claims. The ethical claims generated by communitarianism focus on stability and the preservation of significant attachments to the extended family, community and region, for example.

The political perspective must include both allocative efficiency and distributional concerns. No decision-maker has the objective of decreasing national welfare; therefore, the efficient functioning of the market for human capital must be a primary consideration (Blais, 1986). However, it is also through the political system that the industrialized societies typically address equity concerns and operationalize ethical objectives. Political feasibility entails more than just efficiency and equity. The logic of the political system may make some distributional concerns more important than others and some demands more salient than others to policy-makers. (Trebilcock _et al_, 1985) Job losses are immediate and highly visible. The costs are concentrated. The diffused long term benefits of new jobs or even the long term costs of opportunities that will never emerge due to earlier failures to adjust, are less conducive to political mobilization. Such benefits may be incapable of offsetting the concerns of those who are immediately threatened and who will try to block change. In contrast to the politics of trade policy in which it is possible for the aggregate or consumer interest to be effectively bolstered by mobilized, organized anti-protectionist interests that stand to lose from trade protection measures [Destler and Odell, 1987], there is much less likelihood of mobilizing effective constituencies or groups congruent with the consumer interest in efficient labour market adjustment.

Pressures to assist losers from change and possibly to retard adjustment may also derive from the range of moral values within society. Demands to reconcile desires for economic growth with society's moral concerns make labour market issues a critical problem for the political economy.

In summary, the issue of labour adjustment highlights the potential conflicts among policy objectives. It raises questions regarding the basic efficiency goal of promoting growth through the reallocation of resources. As Gunderson (1985) points out, perfectly functioning markets can generate efficiency but not necessarily equity. The political system must however deal with both allocative efficiency and distributional consequences. Moreover, regardless of fairness considerations, a free market approach to problems of decline is seldom politically feasible. Losers from change can and do turn to the political system for assistance. (Chandler, 1985) Recognizing the multiple and often competing objectives of labour market adjustment is an important starting point in analyzing the range of policies adopted by the OECD countries. The next section of this chapter reviews the various programmes and policies that have comprised the labour market strategies of industrialized nations. For purposes of this overview we concentrate primarily on labour market programmes which involve public expenditures.

II. THE SPECTRUM OF LABOUR ADJUSTMENT POLICIES

In their efforts to cope with declining sectors and increasing rates of unemployment, all OECD nations have turned to some instruments of labour market adjustment. Traditionally, unemployment insurance, employment centres and relief work were the main forms of assistance to labour. In the 1960s, training and mobility subsidies were typically provided to facilitate employment. In the 1970s job maintenance and job creation became important elements in many governments' initial reactions to the economic downturn. At that time the difficulties were perceived to be only temporary or cyclical fall-offs in demand. Often government responses were defensive bridging measures that sought to shield the labour market either through job retention measures or temporary alternative employment for those who had lost their jobs. However, as it gradually became apparent that the performance problems of the early 1970s were not temporary, stop-gap measures of job preservation and public sector employment became less attractive. As the recession continued and the decline seemed deeper and more permanent, problems began to be viewed as possibly structural rather than cyclical. Rising budgetary deficits, restraints on social welfare expenditures and the increasing ineffectiveness of macroeconomic stabilization policies further complicated government efforts to cope with the ongoing economic changes. By the 1980s all of the industrialized states have adopted a range of measures to address the employment implications of economic decline.

As in the case of the trade and subsidy instruments described in the two previous chapters, manpower policies encompass a wide spectrum of options.

They range from measures that preserve the stay option to programmes that enhance workers' exit option. Job retention measures shield workers from market signals. These measures preserve threatened jobs and are generally justified as temporary expedients in anticipation of a turn-around in the economy or in the fortunes of a particular sector or firm. In some cases (Japan and West Germany are two important examples), enhanced exit options (e.g., early retirement) are provided for some workers in order to preserve the jobs of core labour market groups.

Compensation schemes may be designed to encourage stay or to facilitate exit. The scope, level and conditionality of income support programmes determine the extent to which they emphasize the reallocation of resources and hence adjustment. Compensation to displaced workers which provides income support but no work incentives or inducements to adjust is a form of passive labour policy which may be viewed as reinforcing the stay option. For example, U.S. experience with trade adjustment assistance (TAA) indicates that funds were used primarily to maintain workers experiencing temporary layoffs. Some seventy-five percent of the workers receiving assistance under the TAA returned to their old jobs. (Hufbauer and Rosen, 1986; Lawrence and Litan, 1984)

Next on the stay-exit policy continuum are measures that are directed toward assisting workers to obtain new employment by enhancing their search for alternative employment. These programmes typically mean providing adjustment services e.g., better job market information, matching unemployed workers to available jobs, and enhancing geographic mobility and occupational training or retraining.

Policies closer to the exit end of the spectrum focus on new employment and job creation in the private and public sectors. For descriptive purposes we have arrayed the variety of government manpower and employment programmes so that the policies range from those preserving workers in their existing jobs to those enhancing the ability of labour to exit and/or obtain new employment. Within each type the modalities may differ from nation to nation or over time within the same country. In some instances the assistance, whether it be to preserve employment or to provide alternatives, is available to all workers. In other cases the assistance is more narrowly targeted.

STAY

Direct wage subsidies to defer redundancies
Output subsidies
In-house training subsidies
Short-time work
Unemployment compensation
Enhanced compensation
Information and placement services
Training assistance
Mobility assistance
Early retirement
Marginal wage subsidies for new private sector jobs
↓ Public sector employment

EXIT

A. MAINTAINING JOBS

Policies at the "stay" end of the spectrum are directed toward preventing economic dislocation by encouraging employment continuity. As part of what Robertson [1986, p. 278] refers to as a "guardian" labour market strategy, governments have erected barriers to block some of the effects of competition in labour markets. In the 1970s most OECD nations introduced legislation to improve job security by inter alia regulating collective dismissals. The mandated procedures involve advance notification, consultation and negotiation with employees' representatives, as well as severance pay and compensation. [Gunderson, 1985; Yemin, 1982; Cross, 1985]. In nations like West Germany, powerful trade unions have been able to negotiate on an enterprise basis safeguards guaranteeing job security. [Bosch, 1985]

The policy tools depicted on the continuum go beyond establishing procedures facilitating the management of redundancies. The "stay" policies entail government preservation of employment through some form of direct support programme. These measures to maintain jobs are directed primarily toward cyclical changes in labour demand. Wage and in-house training subsidies to avert redundancies, stockpiling subsidies, as well as short-time subsidies were initial and presumably temporary responses to the widespread economic difficulties in the early 1970s. Subsidized maintenance of employment was introduced as a means for carrying workers over a temporary economic slow down in preference to relying solely on income maintenance. Job preservation measures have entailed several forms of government intervention including: a) direct wage subsidies, b) subsidies for output, c) subsidies for in-house training and d) short-time work.

1. **Direct wage subsidies**. Government funding to retain workers during declines in the demand for labour has been used in Japan to sustain the permanent employment system during recent periods of relative slow growth and structural adjustment (Rohlen, 1979) Under the Employment Insurance Law (1975), the Japanese government paid up to two-thirds of the wage bill for excess labour. When this subsidy scheme became incorporated into the Employment Stabilization Service (1977), its emphasis shifted to maintaining employment while a firm is undergoing structural change rather than as an anti-depression tool. Qualifying industries are given a subsidy to defray their payments to temporarily furloughed workers. It is estimated that had even one-quarter of the workers on subsidized furloughs joined the unemployed, Japan's rate of unemployment in the late 1970s would have more than doubled. (Rohlen, 1979, p. 247)

In Britain, direct wage subsidies have been used primarily in the textile, clothing and footwear industries to encourage firms to defer redundancies. The Temporary Employment Subsidy (TES) provided a 20 percent subsidy for up to eighteen months for a worker who would otherwise be laid off. At its height the programme supported some 200,000 workers (OECD, 1982). This direct support of production to prevent redundancies in Britain's textile, clothing and footwear industries was viewed by other European community countries as "the export of unemployment" and a violation of the Common Market Treaty. Eventually the TES was replaced by short-time measures.

In Sweden temporary employment subsidies were provided for older workers in clothing and textile companies, the pulp and paper industry and for employees of companies that are "crucial to a local labour market". (Johanneson and Schmidt, 1980)

2. Subsidies for output. Public programmes that promote the build up of inventories during slack periods have also been used to temporarily preserve employment. Sweden has provided the main example of such assistance. The government provides subsidies to local government for purchases from Swedish manufacturers located in areas with high unemployment. As part of efforts to aid the shipbuilding sector, Sweden provided extensive subsidies for firms to build up their inventories during the recessionary environment of the 1970s. The steel industry as well as pulp and paper also received subsidies for inventory build-up. Unfortunately the slump in the economy proved to be more than temporary, and without increased demand the stockpiles created a new problem of over-capacity (Ginsburg, 1983)

Bail-outs of failing firms may also be considered under the rubric of government intervention to preserve employment. Although some nations, namely Canada and Great Britain, have been more likely to use this instrument, virtually all of the nations in our survey have at some time acted to "save jobs" by propping up a failing firm. In most cases the bail-outs have been concentrated in declining industries. For example, although Germany has typically rejected requests for bail-out aid, it has provided aid to the Krupp conglomerate employing some 110,000 workers in the Ruhr coal and steel district. More recently the German government provided rescue aid to AEG Telefunken, the giant electronics firm that employs 140,000 workers and operates many plants in high unemployment regions (Trebilcock et al, 1985, Chap. 9) French governments have seen fit to provide bail-out aid to large firms in such distressed industries as autos, steel, textiles, and shipbuilding. Despite Japan's general pro-adjustment orientation, it too has made limited use of bailouts in some declining industries. (Hills, 1983;

Ramseyer, 1981). Although subsidized employment maintenance within a failing firm may sometimes be less costly to society than firm failure and indeed may be less costly than alternative forms of social relief, the bail-out has two significant drawbacks. The circumstances at best justify only temporary subsidies yet there is little to ensure that the assistance does not perpetuate a continuing dependence on government support. Furthermore, while the bail-out may provide relief for workers hard hit by economic change, the assistance does nothing to induce worker adjustment through training or mobility. (Trebilcock, et al. 1985)

3. Subsidies for in-house training of redundant workers. The Swedish Employment Maintenance and Training Subsidy (1974) provides funding to keep redundant workers in the firm. The in-plant training subsidy encourages companies to use slack business periods for worker training. During the 1970s some five percent of Sweden's work force spent time in in-plant training programmes. (Ginsburg, 1983, p. 134)

Japan has also made extensive use of training subsidies as a way of preserving the employment of redundant workers. Under the 1978 (renewed in 1983) Law for Temporary Measures for the Unemployed in the Designated Depressed Industries the Ministry of Labour reimburses firms for most of the retraining expenses incurred when dealing with permanent workers. Also within the context of Japan's internal labour market the Ministry of Labour will reimburse firms for their relocation expenses when they transfer their permanent employees. Indeed worker transfers proved to be an important vehicle for adjustment when Japan's steel, shipbuilding and other heavy industries were faced with the necessity of cutting labour costs. The larger and more diversified companies were able to transfer their permanent workers to other companies in the "group". The flow of workers from the ailing steel and shipbuilding industries to auto makers was the most common pattern (Kikkawa, 1984; Ramseyer, 1981)

4. **Short-time work**. Subsidies to partially compensate workers for lost earnings during abbreviated work hours have been used in several European countries. Short-time work allows employers to keep their experienced work force and avoid the cost of dismissal and rehiring of workers. Workers retain their jobs and the loss of earnings is largely made up by short-time allowances from the Government. It is estimated that in Germany the average compensation was about ninety percent of normal net pay (McKersie and Sengenberger, 1983, p. 54) Adopted in West Germany in 1969, short work time was used heavily in the 1970's to avoid or defer redundancies (Labour Promotion Act). By 1975, the number of short-time workers in West Germany equalled the number of unemployed. As of 1982 there were 600,000 short-time workers in West Germany, constituting two and one-half percent of the employed labour force. [Reyher and Spitznagel, 1984, p. 161] Short-time subsidies have also been used extensively in France, Japan and the U.K. as a way of stabilizing employment.

Introduced in Britain in 1978, short-time working compensation provided 75 percent wage reimbursements to employees put on short hours in the textile and footwear industries. In 1979 the programme was succeeded by a more comprehensive subsidy scheme. It was designed to preserve jobs that were threatened in the short run but that were thought to be viable in the long run. From April 1979 to October 1984 Britain spent over £800 million on short-time work subsidies. The programme supported almost 120,000 jobs in its first two years (Moon and Richardson, 1985, p. 70)

5. Evaluating Job Maintenance Programmes. Typically cast as a bridging measure to maintain jobs during a period of reduced manpower demand, subsidizing the stay option has been justified because in some circumstances the social and private costs of unemployment may be so substantial that government subsidies to prevent layoffs can be an economically efficient solution. Saunders (1984) makes the case that "if wages are rigid and labour is not highly mobile, allowing an inefficient industry (or firm) to expire may generate more social costs than benefits" (p. 17). Thus it argued, preserving output and jobs in distressed sectors may be less costly than extended unemployment benefits, forgone tax revenues and additional demands on social services. Subsidizing the stay option has been predicated on a number of extenuating factors. For example, older workers who may have job-specific skills, more accumulated pension or deferred income and seniority rights will have far higher adjustment costs than other displaced workers. Policies that induce firms to maintain redundant workers during periods of weak labour demand have also been justified because they allow enterprises to retain highly trained, skill-specific workers. Temporary subsidies to maintain jobs are posed as a way of dealing with congestion externabilities that arguably obtain in depressed regional labour markets with high levels of unemployment. To the extent that stay-oriented programmes are initiated as temporary palliatives and are clearly short-term, these measures can function as a form of advance notification, signalling to workers that their jobs are at risk while providing

a period of income support for extended job search. This may be especially important when the workers involved are economically or socially disadvantaged and need special assistance. Temporary job maintenance subsidies can be a vehicle for smoothing the adjustment process if there are clear exit signals to the workers receiving support. Plants in which workers are on job maintenance grants might also receive special adjustment assistance services, similar to those which, for example, the Canadian Industrial Adjustment Service (IAS) provides when notified of plant closings. The IAS works with a labour-management committee from the contracting firm as well as community representatives to assist workers facing layoff to find new jobs. IAS adjustment committees assist workers in their search activities before and after layoff.

In essence the time during which the workers receive job subsidies could be used by all parties (government, employers, community businesses and employees) to plan and prepare for the re-employment of those workers in other activities. In this fashion, job maintenance subsidies would ultimately help to make workers more accepting of economic change rather than to support them in opposition to market signals. Potential work force displacements in highly specialized regions or lay offs involving a significant proportion of a community's workers may cause some congestion in the local labour market. Preservation measures that slow down the job separation process can give the redundant workers the necessary time to find a job while lessening the social costs due to lost output.

Empirically the results of job preservation subsidies have shown few efficiency gains. Direct support to prevent redundancies has been used most widely in Britain and Sweden. In both nations, the subsidies were directed toward industries that were undergoing structural changes (textiles and clothing in the U.K.; pulp and paper and textiles in Sweden) rather than cyclical downturns. In what began as regional policies for areas with the most severe employment problems, Britain tried to encourage firms to defer redundancies. At the peak of its usage, in 1979, Britain's Temporary Employment Subsidy maintained the jobs of some 200,000 jobs. To "save jobs", Sweden spent some 20 billion Sw. Cr between 1976 and 1980. Employment eventually shrunk in all of these sectors and there is no evidence that the delays assisted the workers involved to find subsequent employment. [Heikensten, 1984]

In the cases of Germany and Japan jobs have been preserved through subsidized short-time work or retraining grants; yet industries like steel and shipbuilding have undergone shrinkage. The overall adjustment is obtained in part through the operation of a segmented or dualistic labour market. In other words the ability to maintain some workers while also responding to change has been possible because less politically salient workers (women, foreigners, those outside the lifetime employment system) are more easily let go. Adjustment that accompanies job maintenance measures may thus be dependent in part on the existence of an unprotected segment of the labour force. [Goldthorpe, 1984; Streeck, 1984]

Economic efficiency arguments provide little justification for policies to preserve the jobs of redundant workers. Although there may be situations where mobility is very limited and where local labour markets are unable to absorb the unemployed, for the most part the evidence, as reviewed in the trade and subsidies chapters, goes the other way - the costs of job protection are well in excess of the highest estimates of adjustment costs. (Glenday, Jenkins and

Evans, 1982). Moreover, such assistance fails to facilitate the long run redeployment of labour. It provides the wrong signals to workers and in so doing perpetuates some of the same conditions that made it appear necessary in the first place. The primary rationale for job preservation derives from ethical and political desires to cushion the impact of structural change.

The ethical case from a utilitarian perspective would certainly recognize the necessity of government measures to deal with those situations which appear to place an extraordinary adjustment burden on some members of society. However, utilitarians, like economists, would be concerned that such measures do not exacerbate the original problem by removing any incentives for losers to leave and improve their adverse situation. It should be noted that utilitarians and social contractarians would, however, appreciate that unlike the case of business bailouts in which distressed firms receive a subsidy, in a programme of direct assistance to workers there is less leakage of benefits to investors and creditors. Social contractarians who favour measures to moderate the burden of change on the least advantaged in society will not necessarily favour policies that compensate for the costs of change in this way. First of all, such assistance raises the question of horizontal equity. Are all those who are most disadvantaged going to be helped by these measures? More significantly, stay-oriented assistance perpetuates the disadvantageous position by maintaining poor workers in industries with dim future prospects. Such policies, it may be argued, act to maintain an underclass of workers who are discouraged from pursuing the long-term benefits of change.

From a communitarian perspective policies that allow workers to retain their communal ties are favoured. However, this value is not necessarily synonymous with maintaining all existing jobs in a community. Younger workers with less entrenched community ties may place a higher value on assistance. That facilitates employment in higher paid or more challenging jobs outside the community that offer greater prospects of personal development. Older workers may be receptive to generous early retirement arrangements that allow them to remain in the community but avoid more costly job preservation policies. Other workers may be able to be assisted to find alternative employment with other firms or other industries within the same community. In yet other cases it may be feasible for governments to foster or encourage the location of self-sustaining economic activities in the community. Moreover, the single-minded pursuit of a policy of maintaining all existing jobs in a community is likely to be counter-productive even in communitarian terms. In terms of the economic health and social vitality of a community, it is likely, in many cases, to be a recipe for stagnation, decline, and sclerosis - in other words a community that holds very few virtues for its inhabitants. In sum, although all three ethical paradigms favour moderating the effects of transition, labour market policies that simply maintain workers in distressed industries cannot be justified within those frameworks.

The political rationale for policies to preserve the stay option rests in part on the power of losers to delay socially beneficial changes and to threaten the political futures of those in power. Job preservation is a highly visible response to the demands of losers. It allows policy-makers to provide concentrated benefits while diffusing the costs. Ideally it allows broader economic change to continue by buying off political vetoes.

In his analysis of instruments of aid to industry, Andre Blais [1986A] argues that there is too much emphasis on pressure group activity in explaining adjustment policy. He contends that government decision-makers also respond "to general demands for good economic performance". These demands include concerns for growth and stability. Blais stresses the stabilizing role of governments in industrialized societies (pp. 149-150). For Blais and others (Krasner, 1978; Bloom and Price 1975) who argue that stability is a significant political objective, stay-oriented labour policy measures provide a highly visible means of reflecting the importance attached by the polity to stable jobs and community ties.

B. INCOME MAINTENANCE

Compensation for job losers is a fundamental part of the welfare state. Although some nations, like Germany, have created an elaborate welfare structure while others like Japan have not (Cameron, 1978), the basic idea of unemployment compensation is widely accepted. It is a passive form of assistance that provides some level of income maintenance to displaced workers. It does not by itself directly induce workers to adjust to economic change. However, by socializing the risk of unemployment it provides for some economic security in the midst of economic change.

1. Unemployment Compensation. One of the most important of national programmes for labour market adjustment has been Unemployment Insurance which provides income replacement to unemployed workers. As part of the social security net, unemployment insurance provides assistance to workers regardless of the specific cause of dislocation. In providing income protection for

displaced workers the unemployment insurance programme also influences the behaviour of workers and firms. Unemployment insurance schemes vary in terms of their funding sources (proportion of revenues from government, business and workers and use of experience rating to determine premiums), their conditionality (extent to which payments are contingent on worker retraining or mobility, etc.), as well as the level of benefits. [see Table IV-5, col. 5] Income maintenance payments to displaced workers are available in all of the OECD nations. Spending on unemployment insurance varies greatly across nations (see Table IV-3). In Canada for example, by 1984 unemployment compensation expenditures reached almost 11.2 billion dollars, accounting for over 90 percent of federal expenditures on manpower and employment. At the other extreme, Sweden's unemployment compensation in 1982-83 equalled only 13 percent of its labour market expenditures. [Table IV-4]

2. **Special income benefits**. A two-tiered approach for dealing with income maintenance has emerged in a number of countries. Beyond the general policy instrument of unemployment insurance, which is available to displaced workers regardless of the source of their dislocation, additional benefit programmes have been established for some subsets of workers dislocated by long-term structural change. The U.S. Trade Expansion Act (1962) and its more liberal successor the 1974 Trade Adjustment Act (TAA) provided benefits to workers certified to have been hurt by imports. From 1962 to 1970 there were no worker adjustment assistance petitions approved and hence no expenditures under the programme. In the period 1970 - 1974, 82 of 224 petitions were approved.

Under the 1974 Trade Act the number of applications, approvals and expenditures increased dramatically. In 1980 over $2.2 billion in adjustment benefits were paid to 500,000 workers [OECD, 1984; Hufbauer and Rosen, 1986; Aho and Bayard, 1982]. Under TAA, the weekly allowance was 70 percent of the worker's average gross wage before layoff. Benefits were available for up to 52 weeks. TAA claimants received income support some 20 percentage points higher than those workers who qualified only for unemployment insurance (UI). The TAA benefits were not contingent on the workers obtaining retraining, relocation or other employment services. The compensation system under TAA provided benefits only while the worker collected unemployment insurance and hence did little to encourage dislocated workers to seek new employment. TAA recipients who changed jobs had an initial spell of unemployment of almost 42 weeks compared to 33 weeks for UI recipients. [OECD, 1984a, pp. 15-17] In 1981 the programme was revised by the U.S. Congress to shift emphasis away from enriching the level of compensation toward providing labour market services to encourage adjustment. The benefit level was reduced to UI levels and could only be obtained after UI benefits were exhausted. Although the revised programme encouraged trade-displaced workers to pursue retraining (by extending benefits), it did not necessarily result in their obtaining new jobs. [Lawrence and Litan, 1985, p. 10]

Special allowances for workers in designated hard-hit industries are also available, for example, in Australia which under the Structural Adjustment Act (1974) provides special assistance to workers and firms in which there is a direct relationship between their layoff and specific government decisions. [U.S. 1979, p. 16]. Japan under its 1978 Law for Temporary Measures for the Unemployed in the Designated Depressed Industries (renewed in 1983) provides training and relocation benefits to workers in designated depressed industries or designated depressed regions. In Canada, the second tier of income support is narrowly drawn. The Transitional Assistance Benefits (TAB) Programme (1965-1976) provided supplemental income benefits to auto workers laid off as a result of the Canada-US Auto Pact. The Adjustment Assistance Benefits (AAB) Programme (1971-82) provided pre-retirement benefits to displaced workers aged 55 and older in the textile, clothing, footwear and tanning industries. The Labour Adjustment Benefits Programme (LAB) established in 1982 continued to provide benefits to older workers who had exhausted their U.I. benefits. LAB also provided pre-retirement benefits to older workers in designated communities. LAB's pre-retirement benefits for older workers were part of the Industry and Labour Adjustment Programme (ILAP) (1981-83) which provided an array of labour market measures to designated communities. They included enhanced training assistance, enhanced mobility allowance, portable wage subsidies, and direct job creation. The Canadian Industrial Renewal Programme (CIRP) (1981-86) provided labour adjustment measures for displaced workers in the clothing, textile, footwear and tanning industries. Similar to ILAP, CIRP provided short-run assistance in the form of income maintenance as well as improved access to jobs through retraining, relocation and job counselling.

Programme usage for each of these second tier Canadian programmes has been limited. The total number of recipients over the life of the TAB programme (1965-1976) was 3,100. The low takeup is for the most part attributable to the fact that the Auto Pact was a success and did not generate mass layoffs. Under the AAB programme, intended to be an alternative to increased import restrictions in the clothing, textile, footwear and tannery industry, take-up rates were also very low. From 1971 to 1980, only 900 claims for assistance had been approved. In the case of AAB, the limited participation is partly attributable to the strict eligibility requirements of the programme. To qualify for assistance the layoff had to be certified and the individual worker had to satisfy certain eligibility criteria. A layoff could be certified if it was determined that it met a minimum size requirement of work force reduction and the cause of the layoff was a reduction in tariffs or any conditions set by the federal government for special protection. In order for workers in the certified layoff to be eligible for benefits they had to be 54 years of age, to have worked in the industry for at least 1,000 hours in each of the previous 15 years,, have exhausted UI benefits, and be unable to find work.

Under The Labour Adjustment Benefits programme (1982) the eligibility requirements were loosened considerably: if an industry was undergoing noncyclical adjustment because of either import competition or government-induced contractions the layoff could be certified. Worker eligibility criteria were also broadened. These changes in layoff and eligibility criteria broadened the programme's use. In 1981-82 there were 716 claimants in the textile and clothing industries; by 1985-86 the number reached over 5,000.

Under ILAP the range of special benefits for targeted industries and communities increased beyond pre-retirement benefits. These special adjustment programmes were essentially enhanced versions of existing general programmes. In the two years of its existence from 1981 to 1983, the Community Employment Programme (2,354) which promoted job creation and the Industrial Training Programme (1,363) were the most heavily utilized of the labour market assistance programmes available under ILAP. [OECD, 1984a, p. 34-35].

3. Assessing Income Maintenance Measures. From an economic perspective unemployment insurance has the virtue of reducing the costs of job displacement and of facilitating more effective job search. Although these may both be significant in inducing labour adjustment to change, economic analysis also raises some critical concerns regarding the overall impact of unemployment insurance programmes on labour market dynamics and consequent economic adjustment. These concerns focus on the impact of income compensation on the incentive to work, on job search, on worker mobility and on job stability [Cousineau, 1985; Courchene, 1987]. Empirical analyses of Canada's Unemployment Insurance conclude that although UI is an important source of assistance to many Canadians who are victims of unemployment, certain provisions may adversely affect the adjustment mechanism of the labour market. Economic analysis indicates that:

- the UI programme contributes to an increase in the length of unemployment;
- it contributes to an increase in the length of temporary layoffs; and
- it reinforces the concentration of temporary and unstable jobs in high unemployment and low wage regions. (Cousineau, 1985, p. 204)

Economic arguments that UI retards efficient economic adjustments have generated calls for reform to the Canadian UI system. The reform proposals seek to modify the incentives created by the present system by raising the eligibility requirements, lowering the level of benefits and eliminating regional differentiations in the level and duration of benefits. [Canada, 1985; Canada, 1986; Courchene, 1987]

The three ethical frameworks also provide perspectives on UI and income compensation more generally. Utilitarianism follows much of the economic perspective on labour adjustment. That is, utilitarians while sensitive to the need to help those bearing the burdens of change would also be concerned that whatever the chosen instrument of income compensation, it should maximize social benefits net of costs. If the design of unemployment insurance generates incentives that run counter to adjustment and these features could be improved, utilitarians would support those changes that increase social welfare and thus average utility.

For social contractarians, the crucial question is whether income compensation programmes are directed toward the least well-off in society. Data from the Canadian case presented in table IV-5a demonstrates that UI programmes may not be well-targeted toward redistributive goals. The evidence in Table IV-5a shows that over 60 percent of UI benefits go to the top three income quartiles and that 86 percent of the benefits go to those above Statistics Canada's low-income cutoff. [Vaillancourt, 1985, p. 33] Although unemployment insurance is intended primarily to replace employment income, from a social contractarian perspective, it is a failing that it does not focus more on those Canadians with lower incomes. In addition both utilitarians and social contractarians would also be critical of the failure of income maintenance programmes to link the size of benefits to the actual costs incurred displaced workers.

For communitarians, compensating displaced workers may be inadequate for dealing with potentially destructive impacts of change on community stability. Moreover, the more that mobility-enhancing incentives are built into UI and other compensation programmes the less desirable from the point of view of those concerned with the dissolution of existing communities and social structures. Communitarians would directly oppose the neo-classical economic position that seeks to remove regional differentiations in the benefit levels, eligibility criteria and duration of unemployment insurance.

In sum, framework policies for income compensation like UI are arguably neutral policy instruments that may be used to facilitate exit by providing displaced workers with greater opportunities for productive search. They may also encourage the stay option by decreasing workers' incentives to leave regions of high unemployment. Unemployment compensation is a fundamental element in the policies that constitute the welfare state in all industrialized nations. The importance for social and economic stability of socializing the risk of unemployment is recognized by politicians of every political stripe. Although there seems to be a broad consensus on the need for publicly provided unemployment income insurance, using UI as a vehicle to redistribute income across individuals or regions is a more controversial political issue. As various redistributive objectives are built into UI programmes, the less effective they may be as instruments of economic adjustment. UI is typically a complex programme often subject to criticism, but without serious challenge to its existence. It is this legitimacy coupled with a lack of transparency that make it a likely vehicle by which various social objectives can very visibly be built into the programme with little public awareness of the real costs or effectiveness of using the UI system in these ways.

The evaluation of extended benefits to subsets of displaced workers raises a number of questions. Neither economic analysis of market failures nor any of the ethical perspectives suggest a basis for presuming that trade-related adjustment costs differ from the costs engendered by other sources of change. Making a utilitarian or social contractarian case for extended benefits to some workers requires evidence that workers receiving more assistance have either higher costs or are more disadvantaged than other workers. It is not clear that such categorical programmes as the U.S. TAA which helps only trade displaced workers or Canada's Labour Adjustment Benefit (LAB) Programme which focuses on older workers laid off from designated industries can be justified on these grounds.

U.S. studies have found that workers in import-competing industries are more economically disadvantaged than workers in the general category of manufacturing. However, when compared to other displaced workers, TAA beneficiaries are not significantly different in occupational or demographic characteristics (Aho, 1985, p. 233). The equity argument is weakened by the evidence that many trade-displaced workers come from the steel and auto industries in which the average compensation was at least 33 percent above the manufacturing average (Lawrence, 1986). The distribution of TAA recipients across sectors is shown in Table IV-6a. There is evidence that Canadian workers in textile, clothing, footwear, and leather industries (the main recipients of job preservation subsidies) are less skilled and generally more disadvantaged than other workers in manufacturing. However, designating the boundaries of communities to receive special assistance and the problem of excluding workers from adjustment assistance because their unemployment is caused by technological and other factors rather than by import competition has raised concerns over the fairness of these special programmes. (Robertson and Grey, 1985; Aho, 1985)

The political rationale for special compensation benefits rests primarily on the power of losers to delay socially beneficial changes and to threaten the political futures of those in power. Extended benefit programmes are a highly visible response to the demands of losers. It allows policy-makers to provide concentrated benefits while diffusing the costs. Ideally it allows broader economic change to continue by buying off political vetoes. In both Canada and the U.S., special compensation for trade-related dislocation appears to be most likely to occur when 1) there are large numbers of workers who might be adversely affected, and 2) the government is responsible for the change. There is, however, little evidence that such compensation permits the overall process of change to continue while placating vocal losers. In both Canada and the U.S., targeted income maintenance has not served as a substitute for trade protection. [OECD, 1984; Hufbauer and Rosen, 1986] For the most part subsidies to preserve jobs or targeted compensation have entailed no significant retraining element. They have constituted a form of compensation or income maintenance without adjustment. Benefits from programmes like the TAA and IIAP have not been used to facilitate job search and re-employment. In the U.S., some 75 percent of the workers on TAA went back to their old jobs. (OECD, 1984a, p. 21) In Canada, some 65 percent of the laid off workers in industries receiving assistance under CIRP and ILAP returned to their former employer. This compares with an average of 40 percent of laid-off workers who return to their former employment in all Canadian industries. (Robertson and Grey, 1985)

C. FACILITATING EXIT BY SUBSIDIZING SEARCH

During the 1960s buoyant economic growth tended to mask the ineffectiveness of government efforts to enhance the search option by supporting training and relocation. When the employment picture grew bleak in the 1970s, many nations turned to temporary job maintenance and job creation. However, as it became evident that the difficulties of the 1970s were not in all cases temporary, policy-makers have once again looked to improving the search option as a way of facilitating change while also giving income support to job losers. Providing adjustment services to encourage workers in their search for new employment combines the resource flexibility necessary for efficiency and adjustment with the cost sharing dictated by equity. Differences among nations do not derive from whether or not they support search activities but rather from differences in the quality and levels of such support.

In seeking new jobs unemployed workers need information. They may also require training and/or relocation assistance. Government policies to facilitate workers in their search for new employment are less controversial than those designed to preserve jobs. Subsidizing the search option encourages workers to adapt to change by facilitating their finding and entering growth areas of the economy.

1. **Information and Placement**. Most OECD nations have a central agency with responsibility for collecting and disseminating job information through counselling. Often eligibility for unemployment compensation requires registering with the local or district branch employment agency. Those agencies also attempt to coordinate employment and training policy. Haverman

and Saks (1985) describe the typical administrative arrangements that have emerged.

> "With few exceptions, Western European countries have developed comprehensive and stable institutional structures for addressing employment and training issues. The structure is typically characterized by: a) a single primary agency established by the national government but often independent of it; b) an extensive network of local offices emphasizing outreach to employers and employees; c) participation in policy formulation and implementation by employer groups and trade unions; d) substantial expenditures on developing a large professional staff of placement, counseling, and training personnel. (p. 24)

Adequate labour market information is closely associated with successful training. A key ingredient in the success of any skill training is the identification of skills in high demand enabling candidates to find jobs following completion of their training.

Employment adjustment services which include placement and information services, training and retraining programmes and mobility assistance are the components of the search option. Although the general trend has been to establish more centralized systems for collecting labour market information and building up forecasting capability, the delivery of job seeking assistance (information and placement) seems to work best through tripartite structures that bring the services to the plant level (U.S. Task Force on Economic Adjustment, 1986). Virtually all of the surveyed countries have adopted some form of tripartite coordination to facilitate the search for alternative employment by displaced workers. [Table IV-5]

The Canadian Industrial Adjustment Service (IAS) is an example of a cost-effective programme that facilitates the operation of the labour market. (U.S. Task Force on Economic Adjustment, 1986) It is reported that from 1971 to 1981 labour-management committees formed with IAS assistance found jobs (usually within a year) for 66 out of every 100 workers affected by plant closings.

Despite their seeming utility as an instrument of adjustment assistance, job placement services in Canada do not have a strong record of performance. Many job seekers and employers do not seem to view Canada Employment Centres (CEC) as a particularly useful employment service. (Canada, 1981a). In 1981 almost 2/3 of those registered with the local CECs received no job referrals and only 18 percent of job seekers obtained a job with CEC assistance. (Magun, 1981) Job placement services in Western European countries appear to be more heavily involved in the hiring process. A recent survey of these employment services reports that Western European employment services are involved in from 25 to 60 percent of new hires. (Haverman and Saks, 1985, p. 25)

2. Training Assistance. Workers with inadequate or inappropriate job skills face several potential problems. They may be uninformed as to which kinds of skills will make them more employable. They may be unable to gain access to a training programme. Redundant workers may not be able to afford the costs of participating in training activities.

Retraining programmes are either institutional and class-room based or industrial and work-place based. In Canada, for example, institutional programmes account for the bulk of public retraining expenditure. In 1983-84, 83.4 percent of trainees were in institutional programmes. (see Table IV - 6) In 1979 the Critical Trades Skills Training Programme (CTST) was established to offer extended support for longer training periods for high level skills in short supply. The National Training Act, 1982 maintained the emphasis on institutional training. Besides general provisions for institutional and employer-based retraining under the National Training Act, there are special programmes for workers in communities and industries hard-hit by decline. The Industry and Labour Adjustment Programme (ILAP) (1981) brought together a series of labour adjustment measures including enhanced training support for displaced workers in designated communities or in particular industrial sectors (Canada 1981b, Dodge Task Force). Adopted in 1984, the modified ILAP broadens the availability of this support to all displaced workers in designated communities.

Begun in 1985 the Canada Jobs Strategy is the latest reorganization of these labour market programmes. It places more emphasis on on-the-job or industrial training. The major elements of the strategy include: job development, and classroom instruction and on-the-job training. Job development through wage subsidies for hiring and training is by far the major part of the programme. In 1985-86, 96,000 participated in the job development programme at a cost of $237 M. The training programmes had approximately 19,000 participants. [Wonnacott, 1987, p. 100]

Australia's largest training programme, Commonwealth Rebate for Apprentice Full-Time Training (CRAFT) spends about $90 million annually on subsidies for full-time training in technical institutions or training centres. In 1981 almost 100,000 workers received CRAFT funding. (Morrilus, 1984, p. 235) The Swedish system of training (AMU) is an extremely flexible system that uses Country Labour Market Boards to formulate an annual national plan for training courses. Besides the wide availability of training courses at the Labour Market Training Centres there is extensive use of in-plant training. In 1983, about 44,000 individuals participated in Swedish training programmes. Institutional and industrial training, including in-plant training to avoid layoffs, accounted for about 25% of the total number of persons participating in labour market programmes. Public training centres in the U.K. date back as far as 1919. Directed toward correcting the tendency of employers to invest sub-optimally in manpower training, the Industrial Training Board system established in 1974 levied a tax on firms in those fields that were not training workers and provided grants to those firms actively engaged in training employees (Lindley, 1980). By the mid 1970s, there were twenty-seven ITBs in existence covering industries that employed over 15 million people. The other major public sector training initiative in Britain was the Training Opportunities Scheme (TOPS). With an average of 64,000 course completions per year, TOPS is oriented toward the acquisition of specific skills in demand in the labour market.

Japan and Germany have tended to rely heavily on in-plant training. In Japan, the primary burden of retraining is left to the private sectors. Transferring redundant workers to another division, to a subsidiary or an affiliate means that most retraining is internal to large enterprises. At the core of government policy toward labour caught in the process of industrial adjustment is the 1978 Law for Temporary Measures for the Unemployed in Designated Depressed Industries (renewed in 1983) which inter alia subsidizes retraining of workers. In Germany, The Labour Promotion Act (1969) provides for training subsidies to institutional and training institutes. Unemployed workers who refuse to relocate or to participate in a retraining programme may be disqualified from unemployment benefits. In 1985 in West Germany, over 400,000 people participated in vocational training. The proportion of those out of work before starting the training was 65.7%. Thus,workers with jobs are strongly represented among those seeking to improve their skills. [Social Europe, 1986, p. 99]

The Mitterrand government in France has developed a policy of "training leaves" designed to accompany restructuring in French industry. Any company contemplating redundancies may ask the Labour Inspectorate to conclude a retraining agreement which will define the conditions of training and provide state aid for up to 50% of the retraining costs and 30% wage costs. During training leave employees receive an allowance equivalent to 65% of their former gross pay. Such agreements have been negotiated within the iron and steel industry and by Citroen and Renault.

In the U.S. the most important federal programme was the Comprehensive Employment and Training Act (1973). The central aim of CETA was to provide skills training and other employment related services to jobless low-income persons. It also contained provision for public service employment programmes (PSE) to be triggered by specified unemployment rates. The training elements of CETA were soon overshadowed by the negative perceptions of public service job provision. [Johnston, 1984]

In 1982, the U.S. Congress replaced the remains of CETA with the Jobs Training Partnership Act (JTPA). The new law returned to the original intent of CETA by authorizing training primarily for economically disadvantaged individuals. The JTPA also adds a small programme (the Dislocated Worker Programme) of retraining and other employment assistance for displaced workers who cannot return to their previous occupations regardless of the cause of their displacement. However, the training is quite limited because the only income support to JTPA trainees is UI, which usually lasts only about 26 weeks. By providing extended income support for eligible workers enrolled in training programmes, the Trade Adjustment Assistance programme (TAA) has increasingly sought to encourage unemployed workers to upgrade their skills. TAA benefits are available only for institutional retraining.

3. **Mobility**. Mobility grants, like training assistance, are in keeping with the notion that adjustment depends on the ability of resources to move to higher valued uses. In some cases like that of the U.S., mobility assistance is limited to workers in designated trade-impacted industries. In light of the fact that the TAA has proved in large part to be a programme of support for cyclically unemployed workers who return to their previous employer, it is not surprising that the take-up rate for the mobility benefits has been very low. (Less than 1 percent of TAA funds are spent on relocation assistance.)

In Canada, until 1986 mobility assistance was provided by the Canada Mobility Programme (established in 1967). Financial assistance was provided to unemployed and under-employed workers as well as workers anticipating unemployment who must relocate. In comparison to retraining assistance expenditures ($829.8 million in 1981/82), total spending on mobility assistance ($10.7 million in 1981/82) was rather small. [Saunders, 1984, p. 57]. Use of the enhanced mobility grants available through ILAP was quite limited. Only 118 workers were granted allowances during the life of the programme. [OECD, 1984a, p. 35] Mobility assistance is currently financed through the Canada Jobs Strategy. For areas experiencing high unemployment or mass layoffs, enriched mobility assistance is available.

In West Germany, relocation benefits are often part of the "social plan" negotiated by labour and management in instances of mass layoffs. France, Britain, Australia and Canada have all instituted some mobility allowance programmes for displaced workers. For the most part these various schemes have had limited results. Japan's mobility programmes reflects the unique character of Japan's labour market. Firms receive subsidies for the internal transfer of permanent workers. The Japanese government will assist firms with the discharge payments (including mobility allowances) to those workers outside the lifetime employment system. Special mobility assistance is available to workers in designated depressed industries and in designated depressed regions.

Of the nations surveyed here, Sweden has paid the most attention to facilitating the mobility of redundant workers. Active manpower policies of the 1960s stressed not only job creation but also focussed on the supply side by encouraging workers to move to where there were jobs. By the late '60s, opposition to the migration policy increased and regional development took on greater importance. Moving workers to jobs as well as jobs to workers are both now parts of Sweden's policies. If a worker relocates, the government will pay moving and travel expenses and provide an allowance for maintaining two households for up to six months. Mobility expenditures comprise 1 percent of the National Labour Board (AMS) budget. (Ginsburg, 1983)

4. Assessing Search Policies. Policy measures to assist displaced workers in their search for alternative employment include both the passive route of providing income support while they search, as well as more active measures including counselling and retraining that are linked to adjustment. Labour adjustment policies to facilitate exit by subsidizing job information, retraining and relocation are justified by economists because of imperfections in the market for human capital. Three types of market failures are especially

relevant:

a) imperfect information

b) externalities in the accumulation of human capital

c) congestion in labour markets.

Information regarding employment opportunities beyond local job markets and future employment trends upon which retraining should be based is very costly and not easily obtained by individual workers. Private underinvestment in training by employers is tied to the possibility that the benefits of training workers can be appropriated without compensation by others. Employees may also underinvest in training because they cannot finance the costs and are unable to borrow against the security of expected future income. The case for publicly funded mobility assistance rests with the possibility of mass layoffs in depressed areas creating congestion externalities. Under these conditions when deciding whether to leave a congested labour market a worker will only consider his own benefits and costs and not take into account the value of his move to society. [Wonnacott, 1987, p. 28; Trebilcock, 1985, p. 15] Although there is a strong economic case for governments to facilitate search by subsidizing search activities this is not to say that existing programmes have been able to correct market failures and have effectively encouraged adjustment.

Some evaluations of retraining programmes in Canada have pointed to increases in employability and substantial wage gains resulting from completed training. [Saunders 1984; for a more negative evaluation see Davies, 1986] Studies of institutional training estimated in 1978/79 a benefit-cost ratio of 2.7 for such training. (Saunders, 1984) These results were obtained in spite of the fact that 39 percent of the individuals in the study were trained in occupations identified as experiencing surpluses. (Ibid. p. 39) Evaluations of Canadian industrial training found significant gains in the employability of trainees in all age groups and skill levels. The benefit-cost ratio for previously unemployed trainees was 3.3 and for those previously employed it was 3.6. These results are based on the optimistic assumption that income gains will continue to retirement. A subsequent study (1982) that assumed the net benefits would last only five years after training, estimated a cost-benefit ratio of 2.7 per person in retraining in 1978/79. (Ibid. pp. 40-41)

Leaving aside the gains to the individual (and society) from retraining, assessments point to particular problems encountered using training programmes to facilitate adjustment. Most industrial training is cyclical. During difficult economic times firms cut back thereby reducing training opportunities. It should be noted that the Swedes and to a lesser extent, the Germans, have tried to expand their industrial training during recessions. A second problem is that often training programmes developed in response to unemployment pressures tend to be unrealistically short for developing the higher skills needed in a changing economy.

Training and retraining programmes directly address the long-term adjustment needs of displaced workers. In West Germany and Japan, continued receipt of unemployment benefits is conditional on participation in retraining. Several countries including Canada and the U.S., have moved toward emphasizing and enhancing the training opportunities of workers in declining sectors, in contrast to providing them with more income support than other laid off workers. In Canada institutional rather than on the job training receives the bulk of federal training funds. Several studies have criticised Canada's institutional training efforts because they have been directed at occupations with a surplus of workers. Greater emphasis on subsidizing employer-based training would more closely respond to the labour needs of industry. [Economic Council of Canada, 1987, p. 160] Reversing the policy emphasis so that on-job training schemes dominate institutional training programmes would not only diversify judgments about future employment opportunities but also provide more practical job experience. [Trebilcock, 1985, p. 342].

Although the redeployment of resources is fundamental to a growing economy, programmes which attempt to encourage worker mobility have been neither effective nor popular. The main problem with Canada's Manpower Mobility Programme (MMP) is quite typical of the difficulties in other nations. Although enhanced mobility may be the MMP's objective, the benefits paid under it have not met the private costs of relocation. (Saunders, 1984, p. 32-33) Similarly in the two-year period that it was in operation only three workers received benefits under Australia's Structural Adjustment Act. In the case of the U.K.'s Employee Transfer Scheme, evidence indicates that 90 percent of those assisted would have relocated anyway.

The pressure against relocation programmes has stemmed especially from regional governments. A recurrent theme in Canadian policy-making (as well as that of France, Britain and Sweden) is the objection to policies that seek to move workers to jobs. It is argued that government should focus instead on regional development which brings "jobs to workers." The political answers have been quite clear. Regional development programmes have attracted far more funding than mobility assistance.

When retraining and relocation subsidies have been attached to more general compensation packages they have not been very successful. In the cases of both the TAA (U.S.) and ILAP (Canada), there har been little usage of the adjustment services provisions. After revisions to the TAA programme in 1981, the proportion of workers receiving benefits under the Act who entered retraining programmes increased from 3.8 percent on average in 1976-81 to 31.3 percent during 1982-84. However the proportion of those actually obtaining jobs in the retrained field fell from 7.6 to 4.1 percent. Providing workers with an additional 26 weeks of benefits if they enter a retraining programme seems to have encouraged workers to retrain for the sake of extending their benefits rather than to obtain new jobs. (Lawrence and Litan, 1985)

Adjustment services no matter how well designed and executed do not address two important employment problems. First, adjustment services are largely superfluous to cyclical unemployment. Temporarily laid-off workers do not want, or need placement, retraining etc. Programmes in which workers have undertaken retraining in order to continue to receive benefits rather than to prepare for a new job are wasteful. (Lawrence and Litan, 1986) Although it is generally assumed that the displaced workers receiving assistance are permanently separated from their jobs, the problem of distinguishing temporary from permanent displacements inevitably arises in evaluating the effectiveness of adjustment service programmes and compensation schemes. [Robertson and Grey, 1985; Richardson, 1984]. An even more difficult problem for the political system arises when adjustment services do not help permanent job losers. Counselling, retraining and mobility assistance are of little value if there are few job vacancies, and unemployment problems go beyond the need for better matching of workers to vacancies.

Ethical perspectives on subsidizing search activities are for the most part positive. For utilitarians such policies present an opportunity of assisting victims of change without slowing down adjustment and diminishing the overall level of social utility. From a social contractarian point of view, search subsidies might be better tailored to the specific needs of the less advantaged. Evidence seems to indicate that mobility and retraining assistance are often inadequate. Social contractarians might also be concerned that some targeted programmes to subsidize the exit option by bearing part of the costs of investing in socially desirable retraining and mobility may result in subsidized workers competing with new entrants and un-subsidized redundant workers. Hence, these programmes may impose costs on other, less advantaged workers in the form of longer durations of job search. Although communitarians would oppose government pressures to induce greater mobility, public subsidies for job placement, counselling and retraining can help to create a more viable economic base in depressed communities. Enhancing these search activities within communities can sometimes provide displaced workers with real alternatives to exiting from the community or region.

Although government intervention to provide adjustment services may be justified in terms of compensating for market failures as well as more equitably sharing the burdens of adjustment, the political justification is less compelling. The lack of political appeal on both the demand and supply sides may explain why, despite its economic and ethical rationales, the exit option has not been in the forefront of government-led adjustment. Expenditures for labour market information and training do not produce immediate results. No specific jobs are saved, except perhaps in such cases as Sweden's programme to subsidize in-house retraining for displaced workers. Japan's grants for retraining redundant workers by firms are essentially transfers of costs from workers and firms to the government. (Peck et al. 1986). These grants are one of the ways that the government helps firms to bear exit costs and maintain Japan's unique lifetime employment system and internal labour market.

Displaced workers seek compensation and/or comparable jobs; assistance to facilitate occupational or geographical mobility is not always likely to placate those demands. Where there is weak economic growth and few employment vacancies, enhanced adjustment services are unlikely to reduce political pressures to delay or block socially desirable long-run changes. Most training and relocation benefits for workers in declining industries are part of larger packages of compensation. However, the low take-up rates in these adjustment service programmes have been noted. Given the numbers of displaced workers who return to their old jobs, it is quite rational for them not to want to trade off cash compensation for adjustment services.

D. FACILITATING EXIT BY CREATING NEW JOBS

The policy arsenal of most of the OECD nations includes more than policies to facilitate matching workers to existing jobs and/or to compensate them while they search for these jobs. In the prolonged downturn of the 1970s and early 1980s, most governments have gone beyond these tools of labour market adjustment. Through marginal employment subsidies to the private sector, and creation of public sector jobs, some policies have sought to influence the demand for labour by directly expanding employment possibilities.

1. Private Sector Job Creation. Several governments have facilitated exit by increasing labour market demand through job subsidies to the private sector. Even Sweden, which historically has relied most heavily on expanding the public sector, has increasingly turned to facilitating private sector job creation. The New Recruitment Grants programme begun in Sweden in 1978 provided subsidies to firms making net additions to their work forces. Although Sweden does not generally distinguish among displaced workers in their eligibility for special subsidized employment, some special programmes have been set up, for example, to assist redundant shipbuilding workers. In West Germany the government in 1975 established a job creation fund to subsidize new hirings. French and British authorities have tried to create more private sector employment through worker enterprises. Under these schemes, unemployed workers use their unemployment insurance benefits to start their own firms.

Japan uses subsidies to the private sector to generate employment for targeted workers. The Ministry of Labour provides 10% of the annual salary of newly hired workers formerly unemployed in a designated depressed industry or designated depressed area. In Britain, the Adult Employment Subsidy, a spinoff of the Small Firm Employment Subsidy which funded the creation of new jobs, was applied to adults who were unemployed for at least one year in the assisted areas of Merseyside, Tyneside and Leeds. (The scheme ended after one year and about 1,500 placements.)

2. Public Sector Job Creation. One of the ways in which governments have sought to cope with the uneven distribution of the costs of change has been to establish new jobs for displaced workers. Transitional jobs created by

government to temporarily augment labour market demand have been tried in several countries. However, often such jobs are temporary and do little to provide workers with skills for future employment. In Sweden direct job creation is a long established instrument of labour market policy. Relief jobs in Sweden are not targeted to any special group. Sweden has used public sector jobs on a large scale to provide short-term employment. Local governments formulate development plans in advance of any decline in employment so that when employment difficulties affect a particular area these projects can be started without delay. The local level of government receives from the national government 75 percent of the labour costs of each project. In 1978 there were 95,000 people unemployed and the number in relief jobs equaled almost 46,000 (Ginsburg, 1983 p. 131). By 1983, the number of workers involved in relief work and other related forms of labour market measures accounted for 3.7 percent of the labour force. This compares with an unemployment rate of 3.5 percent (Herin and Haltunien, 1983, p. 2) Employment creation through relief work continues to be the single largest area of expenditure by the Sweden's National Labour Market Board (AMS), constituting almost one-third of all AMS expenditures. (See Table IV-4 and Figure IV-1)

Australia's Community Employment Programme (CEP) targets relief jobs toward those who have low skills. Introduced in 1983 by the incoming Labour government, the CEP creates short term public sector jobs lasting 3 to 12 months. The programme suffers from a deficiency common to job-creation schemes: providing short duration jobs to unskilled labour with minimal work experience is unlikely to fulfil substantial training and experience objectives. (Burgess, 1984) Britain's Special Temporary Employment Programme (STEP) was established in 1978 to provide public employment jobs for up to one year. Although begun as a universal programme, it focused increasingly on regions of high unemployment in England's north and in Scotland. (Jackson and Hanby, 1982) In 1981 STEP was succeeded by the Community Enterprise Programme (CEP). It was intended to create more than twice the number of jobs as STEP with an emphasis on more permanent employment. Unlike STEP in which over 5/6s of the places were provided by local authorities and voluntary organizations, CEP was designed to encourage greater sponsorship by private firms and nationalized industries. The most recent large scale use of public sector jobs to reduce unemployment has been France's increase in the size and employment capacity of the public sector. In the first 18 months of the Mitterrand government some 105,000 jobs were created in the public sector.

In Canada the Community Employment Programme (CEP), 1981, provided temporary employment for displaced workers who had exhausted their unemployment insurance benefits. The CEP was the most heavily used part of ILAP. Between 1981 and 1983 some 2,354 workers took part in this public sector jobs programme. [OECD, 1984a, p. 34]

Public sector employment has been far more contentious in the U.S. In 1979, under CETA some $5.1 billion was spent on transitional public service jobs for the economically disadvantaged (Title II-D) and for unemployed persons affected by cyclical economic downturns (Title VI). In 1978 CETA was amended so that the PSE programme was more narrowly focussed on the disadvantaged and less directed toward counter-cyclical unemployment problems. The 1982 Jobs Training Partnership Act which replaced CETA, specifically forbade the use of any funds for public service employment.

There have been wide differences among the industrialized nations in the degree to which their labour market policies rest on expanding the jobs in the public sector. Table IV-7 compares the increases in the size of public sector employment with employment growth in the market sector for several OECD countries. The OECD Secretariat's (OECD, 1980) review of national experiences with public sector job creation programme suggests the following conclusions:

i) in the 1970s the number of jobs created amounted to 3 to 10 percent of the total number of unemployed;

ii) they generally lacked a serious training element in terms of preparing workers for permanent employment opportunities;

iii) males dominated enrollments in the programmes;

iv) youth participated to a substantial extent;

v) the programmes were conceived as a bridge to more permanent employment, but the results were not, in all countries, encouraging;

vi) the jobs created produced useful community services; and

vii) the participants in the programmes were usually satisfied with the experience. [pp. 30-32]

Over the last twenty years, there has been a shift away from general job creation subsidies to a more targeted approach focussing on regional development. Traditionally, regional subsidies have centred on attracting investment capital to depressed areas. To the extent that these subsidies aided rationalization and modernization they did not necessarily add to the employment opportunities in depressed areas. More recently, Sweden, the United Kingdom, Canada and Germany among others, have introduced selective regional subsidies for the employment of labour. These subsidies have included such general programmes as Britain's use of Regional Employment Premiums, Germany's Special Labour Market Programme for Regions with Particular Employment

Problems, Sweden's Act of Parliament on Regional Policy which established annual employment grants for up to seven years for jobs created in the northern areas and some depressed parts of Sweden's south. Through the Depressed District Law Japan extends special assistance to unemployed workers in districts with high unemployment. Its provisions are similar to those for workers in designated distressed industries, i.e., eligible workers may receive 12 months of unemployment insurance benefits; the Ministry of Labour will reimburse firms for most of the retraining and relocation expenses incurred in relation to permanent employees.

Regionally-oriented job creation policies also include more targeted assistance such as Britain's assistance package to preserve shipbuilding on the Clyde and Mersey and Sweden's Swedyard Development Corporation to create new jobs in the shipyards as well as regional aid to generate new job opportunities in the shipbuilding regions. When some 15,000 steel jobs were lost in the late 1970s, the French government provided an industrial adaptation fund ($700 million) to create new jobs in the area of Lorraine. Part of the plan was to induce another large employer, the auto industry, to locate in the area. When the auto industry also came under stress in the late 1970s, this move did not prove feasible.

E. ASSESSING JOB CREATION STRATEGIES

Policies to encourage exit rest on the availability of cash compensation, government-supported adjustment services or the provision of alternative employment opportunities. The efficiency justification for government intervention to increase the number of jobs derives from macroeconomic as well as macroeconomic considerations. In times of high unemployment and low economic growth, the adjustment costs of displaced workers are very high as alternative jobs are not available. Subsidized adjustment search services are not an effective solution to the extent that unemployment is structural rather than frictional. In these cases the process of economic change may be costly and disruptive involving losses of real resources at least where there are cost effective policies available which would lead to more rapid deployment of these resources to more highly valued uses. If the economy at large is not producing sufficient jobs, temporary job creation may be an efficient policy response. (Harris, Lewis and Purvis, 1982; Saunders 1982; Glenday et al., 1981)

The benefits from marginal employment subsidies introduced to encourage plants considering expansion to take on, and sometimes train, additional labour are difficult to determine. The gross costs of these subsidies are quite clear; by definition they will be less per job than the 100 percent subsidy implicit in public sector job creation. However, given rather low estimates of the net jobs actually created by these programmes, the cost of each additional job may be harder to assess. This form of subsidized training and job placement leaves private firms to determine where additional labour will be required rather than having public sector managers try to predict winners. Even with government subsidies, the firm still pays a significant fraction of the new worker's salary and thus has strong incentives to assess correctly its growth prospects as well as to determine the best area in which to train additional workers. Subsidizing these private sector jobs aligns workers' futures and government spending with firms and sectors that expect to expand rather than (as in the case of job preservation subsidies) with firms and sectors that through redundancies have signalled the need to shrink.

The creation of alternative work for those losing their jobs was a frequent governmental reaction to the unemployment levels that developed in the troubled 1970s. Sweden set the lead with up to some 1.1 percent of the labour force employed in government-created jobs. Employment creation as a way of increasing labour demand differs from job preservation. Programmes to defer redundances or maintain jobs are more likely to protect structurally weak enterprises and to maintain the attachment of workers to those enterprises. Public sector jobs or incremental employment subsidies to private sector firms are meant to promote additional employment. OECD analysis (1982) concludes that a programme of marginal employment subsidies ..."would seem to recommend itself as an efficient employment-promoting device on a temporary basis". (p. 83) However, other evaluations are less sanguine. Because there is usually some delay in the policy-making process, counter-cyclical job creation programs are sometimes faulted for not gearing up until after the crisis has passed. Another source of concern about job creation is that the "new" jobs may simply displace the jobs of other workers rather than be net additions to employment. With respect to public sector jobs, it is also possible that national job creation funds may be used as a substitute for funding for local or regional government jobs with the result that no additional jobs are created. Time lags and substitution problems are two concerns that should be influential in the choice of a job creation strategy. Evidence suggests that there are significant displacement or substitution effects in which employers receive subsidies for hiring workers they would have hired anyway. In the U.K., evaluations indicate that 40 percent of the subsidized jobs were not additions. A study of France's first National Employment Pact also estimates that about 60 percent of the participants would have been hired without the subsidy. (OECD, 1982, p. 38)

The costs of public sector job creation are not always easy to assess. Not only is it possible to obscure the real cost of expenditures per job, but it is also difficult to measure the product of public sector jobs. The problem of evaluating output relative to the real costs of creating the jobs makes public sector programmes difficult to evaluate as policy options. A public sector job creation programme may be viewed as a 100 per cent employment subsidy, whereas subsidies toward the private sector are likely to come closer to subsidizing the difference between observed wage rates and real opportunity costs. (Haverman and Saks, 1985) Unlike the marginal employment subsidy schemes in which individual firms opt to participate, and indeed share the costs, public sector job programmes do not depend on market reactions. In order for these public sector programmes to be more than just "make work" schemes, government managers are placed in the dubious position of trying to use the jobs to equip workers with those skills and training that will be in future demand.

Although public sector job creation programmes bear some similarities to private sector employment subsidies, there are some important efficiency-related differences. Private sector subsidies are incentive-based, involving cost-benefit analysis by individual firms. Public sector programmes do not depend on market reactions. Temporary public sector job programmes are primarily seen as supplements to job creation in the private sector. Often their main objective is to provide training and experience for subsequent employment elsewhere. They can provide a transitional stage for those not adequately equipped for permanent employment. Temporary public programmes can also enable some displaced workers to retain their skills and improve their chances of re-employment.

The few follow-up studies of the subsequent employment histories of those in job creation programmes suggest that "for many participants a job creation programme provides more of an interruption of unemployment than a step toward integration into regular employment". (Casey and Bruche, 1985, p. 45) The extent to which public sector job creation programmes are targeted on the hard-to-place and disadvantaged groups is an important factor in evaluating the post-programme job results. One recent analysis of public sector employment as a tool of employment generation advanced this mixed review:

> "Evaluations of public sector job creation programs are limited, especially the extent to which the temporary period of employment actually resulted in workers adjusting to changing market conditions more efficiently. Generally, there was no evidence that temporary public employment reduced joblessness in the long run. The available evidence suggests that public sector job creation programs may serve as an effective bridge between jobs provided alternative employment opportunities become available. However, there was very little flow from these jobs to ones in the private sector. In some cases they have caused an extended dependence on public employment in that workers remain in these jobs longer than was anticipated when the program was established." (U.S., Labour Task Force on Economic Adjustment, 1986, p. 23)

Ethical perspectives on job creation programmes focus on issues similar to those raised regarding "stay" or "search" policies: labour adjustment programmes are generally to be encouraged as a way of sharing the burdens of transition with the losers from economic change. The grounds for targeting workers from specified industries is that they are more economically disadvantaged than workers as a whole. Subsidized job creation may also be justified because there appears to be a societal preference for workers to obtain income through employment (even if this means lower aggregate wealth) rather than through unemployment insurance or welfare. (Trebilcock, et al. 1986; See also Blais, 1985) That being said, if the jobs do not lead to the integration of displaced workers into the mainstream of the economy or if they maintain a dependence on public benefits in depressed communities, then job creation may not be a preferred instrument to serve these ethical objectives.

From the perspective of political efficacy, job creation programmes are not particularly successful. Although they allow policy-makers to respond visibly to the problem of unemployment, the programmes are very expensive. Moreover, job creation programmes are unlikely to fulfil their crucial political function: to neutralize group demands for protection or to buy off vetoes. Obtaining a short-term job in the public sector or a temporary subsidized position in the private sector is less attractive than keeping one's job through more enduring policies or than receiving compensation while searching for another position. Private sector job creation programmes with low marginal impact have proved to be a very costly means of reducing the burden of unemployment on some job losers. Public sector programmes do not solve - nor are they meant to solve - the long term adjustment problems of permanently displaced workers.

III. COUNTRY PROFILES

Each of the industrialized nations has adopted its own approach to the problem of unemployment and adjustment. Although attempts to characterize these approaches can overemphasize the differences among nations, synopses of government policies do illustrate significant variations in the ways governments have sought to develop effective mechanisms to redistribute the costs of change in socially and politically acceptable ways while ensuring some continuing adjustment to market forces.

Given that a strong economy lowers the costs of adjustment because it is easier for workers to find alternative employment, another difficulty in comparing national experiences with labour market policies is that the adoption of particular policy instruments and their subsequent effects may very much depend on each country's particular institutional and social context. For example, Japan's system of lifetime employment constitutes a distinctive context in which Japan's firm-oriented job preservation subsidies have not retarded the adjustment process, although in settings without a segmented labour force, the outcomes might be very different. (Peck, *et. al.*, 1985; Lawrence, 1986) Recognizing these limitations, this section reviews comparative experience with labour market policies with reference to considerations of efficiency, equity and political feasibility.

A. Sweden

The Swedish approach is characterized mainly by strategies to increase demand for labour and to reduce labour market rigidities through training, counselling and placement services. Measures directed toward reducing the effects of layoffs include relief work (public service jobs), wage subsidies and in-plant training. Annual expenditures on these policies equal almost 3 percent of the GNP. Notably, Sweden's expenditures on income maintenance has been, relative to other OECD nations, quite small. Sweden's labour market policies have created what has been described as a sheltered secondary labour sector. (Johanneson and Schmid, 1980) By 1982 a total of 160,000 individuals were involved in labour market programmes. This amounted to almost four percent of the labour force at a time when unemployment was a little more than 2 percent. [Heikensten, 1984, p. 7] [See Figure IV-1]

B. Japan

Japan's approach to labour market adjustment has been to complement market forces. A key element has been policies directed toward reducing manpower in depressed industries by facilitating the exit and retraining of peripheral workers. For the core labour segment, i.e., those workers in the permanent employment system, government support is directed toward reducing the costs to firms of redirecting their permanent employees. Virtually all Japanese programmes for employment preservation and stabilization or exit operate through firms rather than individual workers. In Japan, flexibility and the movement of resources to higher valued uses is often sought to be realized through internal labour markets. Retraining is encouraged either by subsidizing firms or linking retraining to extended income maintenance payments. The relative success with which Japan has dealt with labour adjustment in declining industries must be attributed in part to the overall buoyancy of the economy and low rates of unemployment. (Peck *et al*., 1985)

C. West Germany

West German labour market policies have stressed income maintenance and adapting labour supply through retraining, relocation and short-time work. For the most part Germany has eschewed labour market practices which impede change. As in Japan, many of the negative consequences of adjustment have been borne by peripheral parts of the labour force. Germany has relied heavily on early retirement and short-time work schemes to redistribute employment. According to Federal Labour Office (Bundesanstalt für Arbeit) studies, the greatest labour market impact among the various policy measures was associated with reductions in the work week and extensions in holiday entitlements, both instruments of employment policy that are within the collective bargaining system and not a government responsibility. (Webber and Nass, 1984, p. 189) German labour market policies have tended to be universal rather than targeted. They have been largely subordinated to the demands of a restrictive budgetary policy. The direct role of the state in maintaining and creating employment has been fairly limited. In 1982 a total of 282,000 persons were involved in short-time work (141,000), vocational training (103,000) and job creation measures (40,000). The number of unemployed was 1.8 million. [Social Europe 1983, p. 82]. By contrast, in Sweden, since 1974 the number of individuals in labour market programmes has been equal to or greater than the number of unemployed.

D. France

France's policies have stressed jobs and full employment rather than compensation. Under Prime Minister Raymond Barre, the priorities were to increase job-creating projects and to relocate and redeploy labour. In order to stimulate economic adaptations and to minimize the political costs of unemployment the French government undertook to fight unemployment using several instruments. Enhanced placement services, training and job preparation were part of the strategy as were early retirement and short-time policies. Raymond Barre's government also tried to increase the flexibility of work contracts which resulted in an increase in temporary employment. [Mouriaux and Mouriaux, 1983] When the Socialists came to power in 1981 they continued many of Barre's policies: budgets for placement services and training programmes were increased and inducements for older workers to leave the force were enhanced. The Socialists differed from their predecessors in their reliance on public enterprise as a means of creating employment. In its first 18 months some 105,000 jobs were created in the public sector.

E. Britain and Australia

The British and Australian approaches to labour market have focused on protecting existing jobs. Their income maintenance policies provide few incentives for adjustment. Britain's policies have been described as an example of an absence of overall strategy. (Richardson and Henning, 1984, p. 309) Britain's textiles, clothing, shipbuilding and steel sectors have been among the least adaptive declining industries. (Shepherd _et al_., 1984) Despite large expenditures, Britain's policies have neither diminished demands for protection nor induced resource mobility and adjustment. The policies have emphasized employment maintenance rather than reduction of costs to those displaced. The record in Australia is strikingly similar. In 1981 some $995 million was spent on unemployment compensation, and only $100 million on manpower programmes (job creation, training and relocation assistance) with little evidence of enhanced adjustment or reduced demands for protection. [Burgess, 1984]

F. United States

The U.S. stands out as the most market-oriented of the nations in our review. The job of combatting unemployment is left largely to the operation of the private sector. However the "exceptionalism" which marks trade policy is also reflected in the special assistance given to some segments of the labour force. The Trade Expansion Act of 1962 and the 1974 Trade Act both sought to provide adjustment assistance to workers dislocated by import competition. The 1962 Act with its very strict eligibility criteria (to be eligible for assistance it was necessary to demonstrate that imports were a more important factor than all others combined in causing injury and that tariff concessions and injury must have occurred simultaneously.) was largely unsuccessful as an instrument of assistance. From 1962 to 1974, only 54,000 workers were certified for assistance involving total expenditures of $85 million. (Trebilcock, 1985 p. 132) Adjustment assistance grew substantially under the 1974 Trade Act. The level of benefits increased and the eligibility criteria were greatly relaxed. Between 1977 and 1981, 1.2 million workers received benefits. Spending on TAA in 1981 reached $1.5 billion. [Lawrence and Litan, 1985, pp. 10-11] For the most part assistance under the Trade Act turned out to be an instrument of compensation for temporarily laid-off workers rather than an instrument to promote adjustment out of declining industries. [Hufbauer and Rosen 1986.]

G. Canada

Unemployment insurance (UIC) expenditures dominate all other forms of labour market assistance in Canada. In 1984, UIC entailed expenditures of $10.1 billion compared to $1 million on institutional and industrial training and $12.4 million on the Manpower Mobility Programme. (Wonnacott, 1987, p. 98) Beyond a general focus on compensation and traditional adjustment services, Canada's labour adjustment policies have been narrowly directed toward workers in particularly hard-hit sectors and communities. The Industry and Labour Adjustment Programme (ILAP) and Labour Adjustment Benefits (LAB) are recent efforts by Canadian policy-makers to direct adjustment assistance to those most severely burdened by economic change. There is, however, little evidence that the programme's boundaries have effectively targeted all those dislocated by structural change or that the existence of adjustment assistance under these programmes has diminished demands for trade protection. [OECD, 1984a]

Attempts to summarize any government's approach to labour market adjustment cannot help but fail to do justice to the role of particular policies within each nation's policy set. Table IV-5 compares the many features of the policies adopted by the eight nations in our review. Table IV-8 provides an overview of the expenditures on selected manpower policies.

IV. LABOUR ADJUSTMENT AND POLITICAL REALITY

Without adjustment, long-run economic growth is impossible. However, in the face of economic change, no nation has been able to follow the prescriptions of many economists simply to let the market work. In their efforts to make economic adjustment politically acceptable, OECD nations have adopted myriad labour adjustment programmes. These programmes derive from attempts by politicians to balance the economic objective of promoting market adjustment with non-economic values and political considerations. Our review of labour adjustment policy in this chapter considers the economic, ethical and political implications of efforts by governments to socialize risk and to reduce some of the burdens of change. Demands for government intervention come from those unwilling to accept the distributive and allocative determinations made by the marketplace. The demands of those who seek to be shielded from change or to be compensated for their losses are strengthened to the degree that others in society regard these as legitimate ethical claims.

In addressing the employment problems generated by declining industries in economies marked by slow growth and high unemployment, political systems have been faced with sometimes conflicting pressures for efficiency and equity. At some time during the last two decades each of the industrialized nations have acted to thwart economic change and to protect or save specific jobs in a declining sector. [Chandler, 1985] However that being said, it is also clear that policy-makers have not always opted for labour market strategies that retard adjustment. Aho (1985, p. 231) and others (Chandler, 1985; Katzenstein, 1985; Zysman and Tyson, 1983) have concluded that the real political choice is not between adjustment dictated by unfettered market forces and protection, but between gradual adjustment and no adjustment.

Balancing efficiency and non-economic values leaves policy-makers with a range of policy options. However, as numerous studies have confirmed, government popularity is affected greatly by the health of the economy. [Hibbs and Fassbender, 1981; Winn, 1986] The problem then is how to address society's concerns for the losers from industrial change within a policy context that encourages, rather than retards, adjustment. For as we have argued, achievement of the objectives of a morally pluralist society is based on the dynamic health of the economy. Hence each measure's adjustment effect or extent to which it facilitates the redeployment of resources is a primary consideration. These adjustment effects can be briefly summarized and compared.

Beginning with those measures at the stay end of the policy continuum, job maintenance subsidies have a negative adjustment effect. Job maintenance grants which temporarily preserve employment are transparent subsidies that may compare favourably with the much larger costs to consumers/taxpayers of tariffs and other forms of trade protection. Moreover, as opposed to trade measures, there is less leakage of these labour directed benefits to investors. In cases of one-industry towns and situations in which worker mobility is very limited, grants to maintain the jobs of redundant workers may be a reasonable alternative to compensation. However, decisions to maintain a redundant work force in some establishments are likely to be based on political criteria rather than systematic evaluations of the opportunity costs of potentially displaced workers. Temporary wage subsidies to maintain redundant workers would appear to be contrary to market forces in that they maintain worker attachment to a declining industry rather than enhance their potential for exit and future employment in growth sectors. Although job preservation subsidies do provide income support to those who bear a disproportionate share of the costs of economic change, they offer no incentive for recipients to adjust to those changes.

Support in the form of cash assistance rather than job maintenance has at least a possibility of a more positive adjustment effect. Cousineau (1985, p. 192) points out that in Canada "UI benefits are not designed to subsidize job search but to subsidize the unemployed themselves - who can, to a large extent, use the payments as they see fit". Whether a given compensation programme facilitates or hinders labour market adjustments depends largely on the design of the programme. Those income support schemes that encourage training and mobility have a positive adjustment effect. On the other hand, those that are based on regional differentiations may maintain labour attachment to unpromising employment situations.

Continuing along the labour adjustment spectrum are programmes that facilitate employment search by subsidizing job information and counselling, training and relocation. In principle, policies to facilitate job search should have a positive adjustment effect. Displaced workers are encouraged to leave a declining sector and are helped to prepare themselves for alternative employment. With improved job information and counselling, workers can make their own judgments about employment opportunities. However, whether universal or targeted, schemes to provide employment adjustment services have often not responded adequately to market failures in the human capital market. Training programmes are sometimes too short to provide significant skills; living allowances during training are insufficient and mobility allowances do not cover a reasonable portion of the costs of moving. On the whole, mobility and retraining allowances which are to assist workers to prepare for and to move to more promising jobs have been overshadowed by income maintenance programmes. [Trebilcock 1985, p. 304]

Comparing employment creation programmes reveals that in the case of public sector job creation allocative decisions rest with bureaucrats rather than individuals or firms, and although assisted workers are not attached to shrinking sectors as is often the case of job maintenance, neither are they linked to growth prospects. For the most part public sector job programmes do not position workers to participate in or benefit from the process of economic change and therefore cannot be said to have a positive adjustment effect.

These various policy responses to political pressures to ease the burdens of change are not perfect substitutes. They differ significantly in their potential to enhance adjustment. A crude rank ordering of the adjustment effects of various labour market programmes reveals that policies to strengthen labour adjustment services are potentially the best way to help losers and to encourage adjustment to economic change. Adequately funded enhanced worker adjustment services are the best strategy for reducing adjustment costs. Training, retraining, mobility and counselling benefits need to be delivered as soon as joblessness occurs. The programmes should be widely available and directed toward both the income and job search needs of displaced workers. For those workers facing short term or cyclical layoffs employment adjustment services are largely unnecessary. Any induced unemployment effects of income compensation must be weighed against the undoubted social and political benefits of unemployment insurance. Among the measures to increase labour demand, marginal employment subsidies lessen the burden of adjustment on job labour demand, marginal employment subsidies lessen the burden of adjustment on job losers while facilitating rather than impeding change. Public sector job programmes may direct public expenditures toward losers but there is little reason for such programmes to be the policy of choice. An even less attractive alternative are job preservation subsidies which tie income support to workers remaining in a declining sector. Proposals directed to all unemployed workers are preferable on both equity and efficiency grounds to those targeted to trade displaced and/or sector specific workers. Moreover, Canadian experience indicates that special benefits for trade-dislocated workers have not proved to be an effective political "bribe" to induce acceptance of reduced trade protection.

In conclusion, policy prescriptions that focus on the single-minded pursuit of efficiency overlook significant non-economic values as well as the realities of politics. The evidence is clear: no political system has been able to ignore the social and private costs of change. Labour market adjustment policies can provide decision-makers with a number of ways of mitigating protectionist trade responses while responding to claims for social justice and preservation of social stability. The challenge is to select those labour market policies that address the costs of job losers while encouraging the economic adjustment that benefits society as a whole.

Assessing the instruments of labour adjustment according to ethical, political as well as economic criteria reveals that policies that fail to maximize economic efficiency are not necessarily irrational or inappropriate. Alternatively this does not mean that any sacrifice of economic efficiency is therefore justified by widely-held ethical precepts. Assuming there are legitimate non-economic values that give rise to socially accepted claims for assistance, the problem for the political system is to ensure that policies in the name of social justice do not cloak rent seeking and protection for interests quite different from the intended beneficiaries of the ethical paradigms. In short, how can the political system prevent a morally pluralistic definition of society's interests from being used to legitimize policy choices that are in fact contrary to widely-shared social objectives?

Table 4-1

Changes in Production and Employment in Selected Industries and Countries
Two-year Rate Change Between 1980 and 1982

Industry	Indicator	Country United States	Japan	Sweden	Germany	France	United Kingdom
Textiles	Production	- 9.7	- 2.7	- 6.4	- 9.7	- 8.0	- 12.5
	Employment	- 13.2	- 3.5	- 20.5	- 16.1	- 9.5	- 19.5
Iron and steel	Production	- 33.3	- 9.6	- 4.2	- 14.8	- 16.4	+ 6.0
	Employment	- 26.1	- 3.6	- 12.8	- 9.2	- 9.2	- 28.4
Shipbuilding and repairing	Production	- 8.3	+ 5.1	+ 2.1	+ 5.1	n.a.	+ 13.0
	Employment	- 8.2	- 2.0	- 14.7	+ 2.0	+ 4.2	- 8.0
Motor vehicles	Production	- 7.4	- 2.3	n.a.	+ 4.1	- 10.7	- 4.6
	Employment	- 9.6	+ 7.2	- 2.0	- 2.5	- 9.6	- 26.4

n.a. = not available.

Source R.A. Jeness, Positive Adjustment in Manpower and Social Policies, (1984).

Table 4-2

The Private and Social Costs of Adjustment

Study	Site	Sectors	Private income losses per worker	Social or economic costs
Jenkins et al. (1978)	Ont. and Quebec (1971)	Textiles	$1,294 - $4,895+ (over 3 yr. period)	$4,839 - $5,387+ (over 5 yr. period)
Glenday et al. (1980)	Sherbrooke, Que. (1978)	Textiles		
Canadian Lab. Force Tracking Study (1979)	N.S., N.B., Ont. Que, Montreal (1977)	Textiles and Clothing	$2,100* (3 yr. period)	$15,440* (3 yr. period)
		Electronics	$4,800* (3 yr. period)	$19,170* (3 yr. period)
Alam (1985)	Ontario	Footwear	$1,623· (gain over 5 yr. period)	$1,749· (gain over 5 yr. period)
	Quebec (1983)		$3,416.81· (gain over 5 yr. period)	$699· (gain over 5 yr. period)

+ 1971 dollars.

* 1977 dollars.

· 1981 dollars.

Table 4-3

Total Expenditure on Unemployment Compensation as a Percentage of GDP

$$\frac{UC}{GDP} \times 100$$

	1970	1975	1978	1979
Australia	0.03	0.70	0.90	0.81
Canada	0.80	1.89	1.94	1.51
France	0.14	0.56	1.00	1.16
Japan	0.27	0.47	0.42	0.39
Sweeden	0.26	0.26	0.46	0.45
United Kingdom	0.55	0.79	0.91	0.78
United States	0.93	1.17	0.45	0.41

Source OECD, 1982, p. 143.

Table 4-4

Sweden - Labour Market Expenditures

Expenditures by the National Labour Market Board, AMS (Including Expenditures for Labour Market Training by the National School Board) by Type of Program (In Per Cent of Total Expenditures)

Programs	1972-1973	1982-1983
	(Per cent)	
1 Labour market information	5.7	7.2
2 Geographic mobility	1.2	1.0
3 Employment creation (all types)	45.1	33.5
Relief work	(40.7)	(30.4)
Orders to industry	(1.2)	(0.7)
4 Regional development assistance	7.9	6.2
5 Measures for hard-to-place labour (all types)	9.7	17.4
Rehabilitation, etc.	(1.1)	(3.2)
Special employment creation	(8.6)	(14.2)
6 Measures for refugees	0.4	1.6
7 Unemployment insurance and "cash assistance"	10.2	13.0
8 Labour market training	19.1	19.7
9 Others (civil defense activities, etc.)	0.7	0.4
Total	100	100
Total in million Swedish Kr.	4,283	14,140
In per cent of GNP	2.3	2.4

Source The National Labour Market Board, AMS, "Swedish Employment Policy: Annual Report 1982/83." Stockholm, 1983.

Table 4-5a

Features of programs to assist displaced workers by selected countries

	Feature			
Country	Extent of program coordination[1]	Extent of target population[2]	Wage subsidies	Relocation assistance
United States	Low	Broad	None	Yes
Canada	High	Narrow	Growth firms	Yes
Sweden	High	Broad	Firms which provide training instead of layoffs	Yes
France	High	Narrow	Employers who hire the difficult to employ	Yes
W. Germany	High	Broad	Same as France plus OJT and settling-in allowance	Yes
United Kingdom	Medium	Broad	Employers who split a FT job into two PT ones	Yes
Japan	Medium	Narrow	Growth and declining firms; ranges from 1/4 to 3/4 of wages	Yes
Australia	Medium	Narrow	Declining firms	Yes (Special program)

---

[1] Subjective rank based on an active and visible agency, such as the Canadian Manpower Consultative Service and the German Federal Employment Institute, who has responsibility for overall coordination of employment and training policy.

[2] Subjective rank based on whether a country designates specific industries and/or geographical areas for assistance; those that do, received a "narrow" ranking.

Table 4-5b

	Feature		
Country	U.I. benefits	Income maintenance beyond U.I.[3]	Training: how provided
United States	26-39 wks, amount varies by state; 35-40% of previous wage.	Yes, Supplementary Unemployment Benefits (SUB) and/or Trade Adjustment Assistance	Publicly funded in public and private training institutions; OJT in firms.
Canada	Usually 12 months, longer if in training; 50% of previous wage	Workers 55-64 years on permanent layoff with 10 years tenure	Use both public and private institutions
Sweden	300 days if under 55 years of age, 450 days of 55 +; 80% of previous wage	Agreements may be negotiated in special circumstances	Public compulsory job vacancy requirement
France	Usually 12 months, 70% of previous wage	Workers in training or designated industries	Gov't financed training agreements between firm and Nat'l Vocat'l Assoc., 1.1% of firms wage bill must be spent on training.
W. Germany	312 days at 68% of previous wage; drops to 50% for unlimited time.	Workers in designated industries or dismissed unwarrantably	Government incentives to firms to provide training; emphasize occupational mobility training.
United Kingdom	312 days at $38/wk if single, $61/wk if married; amount based on need after 1yr.	Lump sum, based on tenure and wage; 30 wks pay maximum or full salary if in training.	Use both public and private institutions; emphasis on training youth.
Japan	Ranges from 300 days if 55+yrs. and 10 yrs. of tenure to 90 days if under 30 yrs.; and 1 yr. or less of tenure; 60-80% of previous wage.	90 days for workers 40 yrs.+ in designated industries	Wage subsidy to firm that conducts training.
Australia	In 1980: $48.50 wk if single, $96.50 wk if married; rec'd while on active job search	No	Training allowances to workers.

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[3] Europe-Economic Community (EEC) countries also receive money for dislocated workers from EEC funds from levies on steel and coal production.

Table 4-5c

	Features			
Country	Tripartite coordination	Timing of program implementation	National advanced notification requirement	Job creation[4]
United States	No, but Public Industry Councils under JTPA	Post	No	No
Canada	Yes	Prior	Yes, Industries under Federal jurisdiction and 7 of 12 Provinces; 1 wk to 16 wks.	Government sponsored public or private sector employment
Sweden	Yes	Prior	Yes, notice rises as number affected rises	Temporary public relief work
France	Yes	Post	Yes, 2-14 wks depending upon reason and scale of dismissal	$3,420 from general revenues to unemployed to start own firm.
Germany	Yes	Post	Yes, 30 days after notifying gov't	Government funded jobs in-the-public-interest for the long term unemployed
United Kingdom	Yes	Prior	Yes, rises as number affected rises; up to 90 days.	$56/wk from UI plus $1,400 of your own to start new firm.
Japan	Yes	Prior	Yes, "sufficient" time must be given for workers to comprehend problem	Wage subsidy to firms that hire displaced workers
Australia	Yes	Post	No	Temporary public service and pilot program to help unemployed to start own firm.

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[4] A number of countries also offer regional development assistance (loans and other incentives) to attract and/or develop jobs in certain localities.

Table 4-5d

	Feature	
Country	Government supported early retirement	Work-time reduction schemes
United States	No	No
Canada	Yes	No
Sweden	Yes	No
France	Yes	Yes
W. Germany	Yes	Yes
United Kingdom	Yes	Yes
Japan	Yes	No
Australia	Yes (Compulsory at age 60)	No

Source U.S. Government, Secretary of Labour Task Force, Economic Adjustment and Worker Dislocation in a Competitive Society (1986), Washington, D.C.

Table 4-5e

Transfer	Quintile[a] First (lowest)	Second	Third	Fourth	Fifth (highest)	Low-income cut-off Below	Above
Unemployment insurance	11.6	24.6	23.2	21.3	19.3	14.1	85.9
All transfers	29.1	27.4	17.2	14.1	12.2	28.6	71.4

[a] The sum of UI, Social Assistance, OAS/GIS, CPP/APP, Family Allowance, Child Tax Credit, Veterans Pensions and Workers' Compensation.

Source François Vaillancourt, "Income Distribution and Economic Security in Canada: An Overview," in François Vaillancourt, ed., Income Distribution and Economic Security in Canada, Collected Research Studies of the Royal Commission on the Economic Union and Development Prospects for Canada, No. 1 (Toronto: University of Toronto Press, 1985), Table 1-20.

Table 4-6

Canada Institutional and Industrial Training: Program Expenditures an Summary

	1975/76	1978/79	1980/81
Training expenditures ($000,000)			
Institutional training	455.6	551.4	656.4
Industrial training	48.7	83.7	106.1
Critical trade skills (CTST)	-	-	7.5
Training improvement program	2.3	2.3	-
Total	506.6	637.3	770.0
Trainees started (number)			
Institutional training	213,184	207,558	223,826
Industrial training	61,389	78,936	79,863
Critical trade skills (CTST)	-	-	4,102
Total	274,573	286,494	307,791

Source Annual reports of Employment and Immigration Canada.

Table 4-6a

Trade Adjustment Assistance: Certification by Major Industry, Cumulative April 1975 to April 1983

Industries	Certifications	
	Number of workers	Percent
Coal	5,436	0.4
Textiles	25,913	1.9
Apparel	156,247	11.3
Footwear	79,477	5.8
Steel	186,455	13.5
Electronics	59,587	4.3
Automobiles	724,143	52.6
Fabricated metal products	30,434	2.2
Other industries	109,702	8.0
Total	1,377,394	100.0

Source U.S. Department of Labor, Employment and Training Administration, Office of Trade Adjustment Assistance, Washington, D.C.

Table 4-7

Public and Private Sector Employment 1965-1980

Country	Change in employment (%-change) Private sector	 Public sector
	(Per cent)	
Australia	+ 5	+31
Canada	+21	+22
France	- 1	+13
Fed. Republic of Germany	- 8	+19
Japan	+ 7	+16
Sweden	- 3	+45
United Kingdom	- 8	+ 9
U.S.A.	+17	+13

Source Schmidt M. (1985)

Table 4-8

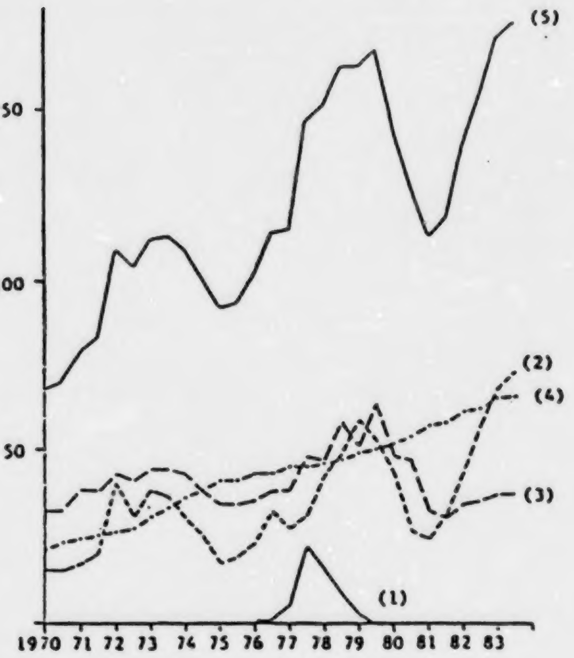
Spending on Selected Manpower Adjustment Policies in Selected Countries in the Period 1960-1977

		As a percentage of gross domestic Product				As a percentage of public expenditure	Unemployment rate
		Measures to improve labour placement	training	Job creation and job maintenance	Total	Total	
Canada	1968	.06	.26	.03	.35	1.05	4.8
	1969	.07	.30	.00	.37	1.09	4.6
	1977	.19	.30	.23	.73	1.82	8.1
Germany	1968	.13	.04	.15	.32	.87	1.2
	1969	.13	.06	.16	.35	.98	0.7
	1976	.16	.19	.61	1.00[a]	2.24[a]	4.1
Japan	1969	.15	.02	.08	.25	1.64	1.1
	1970	.18	.02	.07	.27	1.75	1.1
	1976	.19	.04	.07	.30	1.63	2.0
Sweden	1961	.07	.09	.36	.51	1.65	1.5
	1970	.16	.28	.24	.68	1.59	1.5
	1976	.28	.72	1.10	2.16[b]	3.99[b]	1.6
U.K.	1968	.04	.03	.00	.07	.18	3.3
	1970	.06	.04	.00	.09	.23	3.1
	1976	.09	.34	.38	.82[c]	1.77[c]	5.5
U.S.A.	1969	.05	.09	.05	.19	.62	3.5
	1970	.06	.11	.05	.22	.66	4.9
	1976	.04	.26	.41	.71	2.03	7.6
Data available for 1976 only:							
Australia		.06	.11	-	.17	.50	4.5

Source OECD, 1979

FIGURE 4-1

Number of individuals benefitting from various
labour market policy measures



(1) Training to prevent layoffs and dismissals
(2) Relief work
(3) Labour market training
(4) Sheltered work
(5) Total

(Seasonally adjusted quarterly data, first and third quarter each year, thousand individuals)

Source: L. Heikensten, 1984, p. 7

5 POLITICAL INSTITUTIONS AND ECONOMIC ADJUSTMENT

I. INTRODUCTION

Following the economic achievements of the post-war period, the weak economic performance of the 1970s and early 1980s has confronted most industrialized nations with the problems of rapidly changing patterns of comparative advantage, rising inflation, increased unemployment and slow growth. Adjustment to economic change has become a central concern of policy-makers. Economic problems are political problems for solutions to economic problems cannot be considered in isolation from the political context. Economic strategies must be politically viable. No nation has been able to ignore totally the demands for assistance from those who stand to bear the transitional costs of adjustment. Moreover, there is no evidence that politicians are committed only to economic efficiency in coping with economic change [Shepsle and Weingart, 1982; Trebilcock et al., 1982, chap. 3; Bloom and Price 1975]. Within the mainstream of liberal democratic societies, other policy objectives, especially distributional concerns and job and community stability, have attained prominence and legitimacy. [Alt and Chrystal, 1983; Blais, 1985]. The three preceding chapters (II - IV) have depicted the spectrum of policy instruments that industrialized nations have employed in dealing with declining industries. It has been shown that the instruments are not fungible vehicles of adjustment. The instruments (trade measures, subsidies, and labour market programmes) have been distinguished by their economic, ethical and political implications. From an economic perspective, alternative instruments vary substantially in the degree to which they promote or retard resource mobility. The ethical paradigms: utilitarianism, social contractarianism and communitarianism which suggest multiple and sometimes competing values, may give rise to policy demands which diverge considerably. Political considerations, which centre on the visibility and distribution of the costs and benefits associated with each instrument, often yield a rank ordering of instruments that differs substantially from the economic or the ethical. In coping with the severe economic pressures faced by most of the industrialized nations some governments have reduced the degree of incongruity between economic, ethical and political prescriptions; they have been able to forge the political support necessary for wealth maximizing, growth-oriented policies. Other governments have relied on defensive policies composed of instruments that seek to shield labour and/or capital from pressures to adapt. Although these protectionist policies may be justified by reference to broad social objectives, the enormously high costs of these efforts often points to rent-seeking more than the pursuit of these societal objectives as the primary explanation.

This chapter extends the positive analysis of policy-making to focus on the structural and institutional characteristics of the political economy. The purpose is to develop a view of the political determinants of adjustment policy that links patterns of policy to the institutional attributes of the political system. [Richardson, 1982; Katzenstein, 1978; Dyson and Wilks, 1983] The aim here is not to try to account for any one specific policy decision but rather to advance a framework that locates the thrust of governmental responses to troubled sectors within the workings of the political system. Coping with declining sectors can lead in several different directions. One approach is to try to defend the status quo by seeking to insulate those sectors, firms and/or workers under competitive pressure. The thrust then is to oppose economic change. A second strategy is to try to manage adjustment by softening or cushioning the impacts of economic change [Blais, 1985]. Another strategy is to use the resources of the state to accelerate adjustment by actively facilitating resource mobility away from declining sectors toward areas of growth. A fourth strategy argues for letting unconstrained market forces work.. In this case, government does not directly try to influence resource allocation at the micro level. [Chandler, 1985; Magaziner and Reich, 1983]

Adjustment policies are, of course, more varied and complex and are unlikely to be so easily and consistently classified. Nonetheless these categories do enable us to depict significant differences in approach. The thrust of each nation's policies toward declining sectors is reflected in its choice, design, and application of the various policy instruments. The deployment of these instruments has been detailed extensively in the previous three chapters. At this point, we briefly profile and contrast various national approaches to adjustment.

The United States, the nation perhaps most visibly committed to "letting the market work", in dealing with decline has made only limited use of firm, sector or regional subsidies. Similarly, labour adjustment schemes have been limited in their deployment and impact on adjustment. On the other hand, the U.S. has made extensive use of trade instruments as it has often turned to "special protection" to insulate parts of the economy from foreign competition.

Australia, Britain and Canada, although all nominally committed to a market economy, can be best characterized by a largely defensive posture towards adjustment. In each of the three, trade protection has been relied upon to shield domestic interests from foreign competition. Subsidies to prop up declining industries and firms have played a role in each's policy inventory. Britain and Canada have also provided extensive regional assistance for which there is little evidence of positive adjustment effects. As would be predicted from the overall defensive thrust, labour adjustment schemes in all three nations have tended to focus on preserving threatened jobs rather than promoting adjustment to change.

Although the particular policy modalities in each country differ substantially, Sweden, West Germany, Japan and to lesser extent France, have for the most part taken their cues from the direction of the international market. France more than the other three has intervened extensively in its economy. Notwithstanding some notable exceptions at times in, for example, the shipbuilding, steel and textile industries, the primary thrust of successive French governments has been to enhance the operation of the market and to play an active role in the rationalization of key industrial sectors [Hall, 1986, pp. 137-192]. As we have seen, each of the four certainly has its pockets of protection and has at times acted to thwart economic change. However, their overall strategies stand in contrast to more defensive strategies. Trade protection has not been as important to these nations as it has been to the other nations described above. Sectoral subsidies have been an important tool. In France, West Germany, Sweden and Japan sectoral subsidies have for the most part been tied to rationalization and restructuring. Sweden, West Germany, Japan and to a lesser extent France may also be distinguished by the more extensive use of labour programmes to facilitate adjustment.

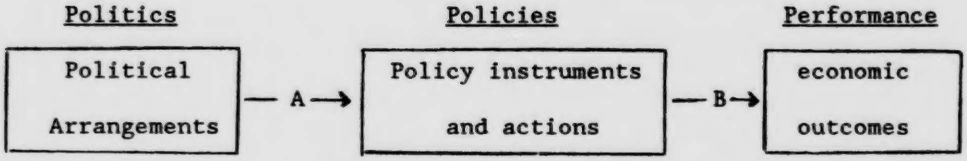
A. INSTITUTIONAL PERSPECTIVES

Institutions, or the rules, processes and standard operating procedures that structure the relationships between individuals and interests in various units of the polity and the economy, shape the degree of influence that any one set of actors has over policy outcomes. Institutions shape the route to power. An institutional model emphasizes that policy is much more than the simple sum of opposing group pressures. [McKay, 1983; March and Olson, 1984] The organization of the political arena plays a crucial role in determining what interests are articulated as well as what governmental responses will be forthcoming. [Hall, 1986; Ikenberry, 1986] Institutions provide both constraints on, and opportunities for, adjustment policy. Governmental structures also set in place the instruments that the state may draw upon. [Katzenstein, 1978; Zysman, 1983] This translates into the differential propensities and abilities of governments to assert control over market forces and outcomes.

Although this chapter is premised on the impact of political institutions on public policy, it is perhaps best at the outset to stress the limits of this approach. The relationship between political structures and public policy is not automatic. Those who employ an institutional model [e.g., Scharf, 1984; Hall 1986 and Ikenberry 1986] accept that there is no simple determinism at work. The finding that there may be an institutional logic to the process of economic intervention does not necessarily explain or predict the specific treatment of any sector or firm. The focus here is on the critical role played by institutions in the general approach to adjustment of each nation.

There are three separable analytical dimensions in evaluating the relationship between political arrangements and economic adjustment: Politics, Policies, and Performance. Figure One indicates the three sets of variables and the linkages between them. A direct connection between politics and economic outcomes may be set aside for the moment if we assume that any influence from the political context must occur through the policy-making process.

Figure One


Politics
Policies
Performance
Political Arrangements
A
Policy instruments and actions
B
economic outcomes

The link between policy instruments and performance (linkage B) is the problem explored in the previous chapters. However, it must be emphasized here that theories of economic growth are exceedingly complex and even if one could model accurately the growth process it would be impossible to argue that the crucial factors are within the control of any national political system. We do not try to explain different rates of inflation, unemployment or growth. Such differences result from the interaction of many factors. As Scharf has stated:

> "The appropriate analogue for successful economic policy cannot be steering (where all relevant variables are under direct control) but at best, small boat sailing (where goals are reached through skillful adaptation to, and exploitation of, circumstance beyond the skipper's direct control)." [1984, p. 262]

The concern here is with linkage A -- the effects of political arrangements on policy options and actions. Our objective is to examine the impact of political institutions on the ways that the advanced industrialized nations have addressed the common problems of coping with industrial decline. There are many reasons why a firm or entire sector may decline. Earlier chapters have shown that adjustment pressures can arise from competition from newly industrialized nations, from other advanced industrialized countries, from new technologies or changing domestic tastes. What is clear is that regardless of the divergent causes of decline, the responses by those industries and firms in decline have been quite similar - they invest in politics. [Destler, 1986; Grant 1983; Trebilcock *et al*. 1985; Dyson and Wilks, 1983.]

B. THE DILEMMA FOR GOVERNANCE

Economic change, especially as it has occurred in the 1970s and 80s in the context of weak overall economic performance, presents real problems for any political regime. Although aggregate national welfare gains are the undisputed results of economic adjustment, economic change is not without costs and indeed some losers. [Riddell, 1986]. Efforts to avoid the costs of change present difficulties for the political economy. There are strong incentives for those industries facing contraction to demand trade protection or subsidies if the costs can be externalised. Trebilcock [1985, pp. 26-27] has compared the situation to that of the prisoner's dilemma problem of negative-sum outcomes from non-cooperative behaviour. Samuel Beer's [1982] account of Britain's political problems develops the concept of pluralistic stagnation to characterize this debilitating process. Others [Olson, 1982; Mueller, 1983; Thurow, 1980; Goldthorpe, 1984] pose the question in terms of conflict between the democratic, pluralistic political system and a capitalist economy. "Is the pluralist political process incapable of resolving distributional issues without sapping the efficiency of the market oriented capitalist system?" [Mueller, 1983, p. 276] Specifying those institutional arrangements which attenuate those negative outcomes and which seem to facilitate adjustment is the task of this chapter.

In a morally pluralistic society support for economic efficiency may be tempered by other objectives. Departures from the goal of economic efficiency do not necessarily imply an incapacity to cope with change on the part of the political system. The focus here is on the extent to which the political process is structured so as to allow citizens and politicians to identify and to balance competing values. In essence we are interested in the factors that determine the functioning of the political market for adjustment. The analysis centres on two questions:

1) How do political institutions and organizations bear on the capacity of sectors and firms to protect themselves from market pressures?
2) How do political institutions and organizations shape the capacity of the state to provide adjustment promoting or retarding policies?

These questions correspond to the demand for and supply of adjustment. First, the focus is on the propensity of economic actors to realize their goals through politics. The demand side reflects the concern with what government is urged to do.

II. THE DEMAND FOR ADJUSTMENT

In the market for adjustment the demand side refers to the kinds of private sector interests that are represented and the political strength behind them. The institutional perspective developed here predicts that the impact of interest groups on economic adjustment depends on their own actions and the responsiveness of the state. The demand side of adjustment (and protection) is shaped not only by variation in private sector organizations but also by patterns in the relationship between interest groups and government. These factors condition not only the kinds of demands initiated by private sector groups but also the nature of the support they provide for government action.

A. PRESSURE GROUPS

The notion of policy demand focuses attention primarily on the activities of organized interests. Many of the aggregate studies of the political factors associated with trade protection rely on rudimentary models of the political process in which political demands are simple articulations of short-term economic interests and in which decision-makers are merely passive intermediaries registering pressure group influence and voting strength. The

Pressure Group model and Adding Machine models described in Chapter II employ various industry characteristics as proxies for pressure group efficacy and voter concern. For example, within the pressure group model, it is hypothesized that the level of protection is higher when there are fewer firms in a sector. Higher industry as well as geographic concentration is expected to be linked to fewer free riders and a greater ability to organize and thus lobby effectively. Alternatively the Adding Machine model, predicated on the voter strength within industry, emphasizes variations in the number of voters and their potential for mobilization. As noted in Chapter II, the empirical evidence on the postulated political determinants of trade protection is often contradictory and incomplete.

Robert Baldwin's analysis (1985) points to the problems of relying on any single model for the determinants of protection. He concludes that models that focus exclusively on short-run direct self-interest are inadequate and that consideration must also be given to the long-run self interest of voters and pressure groups and of the workings of the state. [p. 174] Similarly, John Baldwin and Paul Gorecki (1985) point to the inadequacy of the rent-seeking pressure group model. They argue that "altruism" is an important variable in explaining interest group behaviour. Blais (1985) in his overview of pressure group studies and protection concludes that a simple rent-seeking model is of little utility in explaining the pattern of protection in the OECD nations.

Another problem with pressure group analysis is that often the underlying theories are far too vague in their depiction of the policy process. As Cline (1983, p. 195) points out, "often multiple interpretations [about the political process] may be placed on particular outcomes. For example if protection is negatively related to wage rates is it because of public sympathy for low paid workers or because of comparative disadvantage?" Cline notes several studies in which the results could have been cited to support quite divergent conclusions about the domestic political environment and protection (p. 182-183).

If the level of protection is "determined" by characteristics of the industry, why are similarly constituted sectors treated differently across nations? A recent study of change in Europe's industries concludes that the evidence of the sectoral studies suggests far more useful generalizations by country than by industry. The authors argue that it seems more feasible to find general strategic similarities across sectors within the same country than across countries concerning the same sector. [Shepherd et al. 1983, p. 15]. Moreover, there are significant policy differences over time that cannot be explained by focussing exclusively on industry characteristics.

In the analysis of group interests, the work of Mancur Olson has attained special prominence. Group-state linkages are at the heart of Olson's explanation of differences in rates of economic growth among industrialized nations. Olson [1982] argues that organized interests are rent seekers. As such, pressure groups are the major social obstacles to economic growth. He explains differences in rates of economic growth among political systems by variations in the level of pressure group activity. As these groups proliferate, their cumulative impact is to use the state to impair the working of market forces and to retard growth. Olson's analysis has been subject to much debate. [See for example, Rogowski 1984; Crouch, 1983] and some empirical testing [Blais and McCallum 1985; Mueller 1983] As Dean (1983) and others have argued (Gourevitch, 1977; Rogowski, 1984), Olson's exclusive concern with growth retarding groups leads him to ignore those groups which will benefit from and indeed seek a larger pie. Colin Crouch (1983) refers to these as "growth hostile" and "growth friendly" groups respectively. In the case of trade policies for example, although some seek protection others are equally concerned and committed to trade liberalization [Gourevitch, 1977; Rogowski, 1983]. In their study, The Politics of Anti-Protection, Destler and Odell (1987) describe pressure group activities to further a liberal trade regime. Similarly, Milner's (1987) work on France and the U.S. finds that significant anti-protectionist forces have been created by increasing economic interdependence (p. 644-45). Milner finds that these new economic linkages have created domestic interests with large stakes in fighting protection. In the free trade debate in Canada, most organized business interests have aligned themselves in favour of more liberal trade arrangements with the United States.

Blais and McCallum's comparative analysis of the national rates of economic growth in the OECD suggests that government activities at the behest of special interests have had a negative effect on economic growth. [1986, p. 183-84]. These findings would seem to support Olson's basic proposition that the organization of interests which pluralism encourages results in restricted operation of market forces and thus constrained economic growth. However, closer examination of Olson's argument reveals several shortcomings, two of which relate directly to pressure group demands and economic performance. First, Olson (and Blais and McCallum) are unable to measure directly the strength or importance of special interest groups. An indirect measure, the length of time that such groups have had to develop without major disruption, is used as a proxy for the importance of special pressure groups. [Choi, 1983]. This measure of the strength of pressure groups is referred to as the degree of institutional sclerosis. High values imply long periods of stability and hence powerful groups. Countries with the lowest sclerosis indices include Japan, Austria, France and West Germany. Unfortunately, the finding of a strong negative relationship between economic growth and institutional sclerosis [Choi, 1983; Blais and McCallum, 1985] tells us little in fact about pressure group strength or its effects. There is ample historical evidence that pressure groups in Japan, West Germany, Italy and France were not emasculated by World War II. There is no evidence that pressure groups in these countries started anew or that today the interest groups in these societies are weaker than those in the U.S. [Rogowski, 1983, p. 720] Institutional sclerosis may be measuring something that is related to economic performance but it does not tap the notion of group organization envisaged by Olson.

A second empirical difficulty with Olson's theory derives from the hypothesis that weak special interest groups are associated with superior economic performance. However, most accounts of the relatively strong economic performance in Austria, Sweden, Japan and West Germany, indicate that an important ingredient in their strong performances has been organized interests working with government [Scharf 1984; Katzenstein, 1985; Katzenstein 1987; Pempel, 1982; Heclo and Madsen 1987] In those national settings, pressure groups are critical to the effective management of economic change. Yet in other cases such as Great Britain, strong groups are deemed to have had a negative impact on the nation's ability to cope with economic change [Beer, 1982; Grant, 1982].

Olson's analysis of encompassing organizations may shed light on some differences among groups and their impacts. Olson argues that inclusive groups are different from more narrow interest organizations. He states that "encompassing organizations have some incentive to make the society in which they operate more prosperous and an incentive to redistribute income to their members with as little excess burden as possible" [1982. p. 53]. The apparent economic success of countries relying on corporatist processes has been explained in large part by the inclusive, consensual nature of encompassing groups within a corporatist system. [Goldthorpe, 1984]

The organization of the major economic interests, labour and business, and their relationship with government is a central element in the political economy of each nation. [Katzenstein, 1978; Martin 1986] These institutional arrangements, broadly defined, appear to help shape the general framework for government's role in adjustment.

1. Labour Organizations

No feature of interest organization has received as much attention as the extent to which labour groups assert and defend their interests. Labour unions' organizational interests and ideological positions indicate strong support for full employment and the welfare state. (Martin, 1986; Lange *et al*., 1982) Comparative analysis of OECD nations demonstrates the association between the strength of the labour movement and relatively low levels of unemployment [Cameron, 1984]. Other research at the macro level by Lange and Garrett (1985) points to two conditions under which it is rational for labour to adopt a strategy of wage restraint to foster growth: 1) the existence of a Left party with strong ties to the labour movement and 2) control of the government by the Left party. Lange and Garrett's findings show the implications for economic growth of variations in labour's organization and political strength.

> "Where the labour movement was both politically strong and organizationally very strong, growth, unemployment and well-being performances were relatively better than in all other cases. When labour was either not organized for collective action, or where the risks of pursuing collective gains were great (weak political Left), growth, and well-being performance deteriorated. If the Left was weak in politics, governments were less sensitive to labour's distributive demands for full employment." [Lange & Garrett 1985, p. 826]

Aggregate empirical analysis by Schmidt (1985) Cameron (1984) and Scharf (1984) have found that nations with strong, centrally organized labour movements with centralized collective bargaining arrangements were generally more successful in handling international economic changes than other countries [See also Katzenstein 1985]. In essence, it is argued that these labour union movements function as encompassing organizations which recognize that they cannot avoid internalising the costs of adjustment preventing policies. At the other extreme, in those nations such as the U.S. and Japan with politically weak and fragmented labour organization, policy-makers have been able to rely on higher levels of wage flexibility and mobility to foster adjustment. It is in those political systems in which labour is not strong or centralized enough to function as a potent encompassing group but is nonetheless strong enough politically to prevent labour market adjustment along Japanese or American lines, that adjustment retarding labour strategies are most likely. [Beer, 1982, p. 50]

But what of labour's role at the micro level? What are labour's demands in the politics of industrial decline? In the cases of the U.S., Canada and the

U.K., labour may participate in a defensive coalition, or in other cases, including the Netherlands, Austria, Sweden, and West Germany, trade unions may be participants in the reorganization of declining sectors. [Wolinetz, 1986; Lange et al., 1982; Dyson and Wilks, 1983] In these latter cases, unions have used their influence to cushion the impact of change while endorsing restructuring and often downsizing. In terms of our analysis, there is evidence of two distinct categories of demands by organized labour. The pattern of participation in industrial restructuring is associated with more centralized labour organizations focussing on long-run concerns of sectoral viability. In contrast, labour demands from more fragmented union movements, with well established traditions of militancy, have resisted industrial restructuring. Although the organizational characteristics of labour may be important in determining labour's attitudes toward adjustment, other circumstances external to the unions also shape labour's role. Labour's involvement also depends on business and government. Wolinetz [1985] suggests that business interests may wish to include labour in order to legitimize restructuring or because trade unions have sufficient power to be disruptive if excluded. Similarly for government the inclusion of trade unions can be an important device for legitimizing policy and minimizing conflict.

Differences in labour organization appear to shape demands for adjustment policies. The institutionalization of labour's participation in the adjustment process and the dominance of trade unions in the export sectors within the labour movement are important features of West Germany's response to industrial adjustment. Although nationally organized labour is not a strong force in Japan, the corporatist role of labour at the level of the firm and in such sectors as coal and shipbuilding is an important feature of that country's approach. The close labour-management relations at the level of the firm means that labour can provide flexible support when a company is restructuring. [Saxonhouse 1979] In West Germany, the broadly-based labour movement provides flexibility and support. Workers are not left to bear the burdens of firm failure nor must they stand in absolute opposition to layoffs because a firm is in decline. [Markovits 1982; Gourevitch, 1984] However, it is also argued that government policies have shielded organized labour against competition and through social policy measures and labour law made it more costly to employ labour. It is said that these labour market policies have contributed in the truncated ability of West Germany's economy to create jobs. [Soltwedel, 1987]

In France, organized labour has been weak at the national policy level. There are few cases where labour presents a united front to champion policies that will enhance its mobility and standing. Even in those firms or sectors where there are strong trade unions, French labour-management relations have not instituted a flexible system like the Japanese that can facilitate positive adjustment (Zysman, 1983, p. 164). It is in Britain that the demands for protection are most apparent. The trade union movement is fragmented and has made few demands for industrial policies of general benefit. Moreover, labour fragmentation at the level of the firm has obstructed the internal flexibility often necessary to assist a declining company to restructure or contract.

2. Business Organizations

Business or capital is more than just another political interest. The privileged position of business in industrialized society is well-established. [Lindblom, 1977, Coleman, 1985] Although there are organizational indicators of labour strength, there are no comparable systematic measures of the, organization of business. [Bowles and Eatwell, 1987] For the most part, the political structure of the business community is usually inferred from its economic structure. [Katzenstein, 1985, p. 91]. As in the case of labour, the question is in what circumstances will business interests seek to restructure and provide political support for adjustment and alternatively under what conditions do business interests act to seek protection?

Those nations (Japan, West Germany and Sweden) in which business is represented by encompassing organizations are more likely to be given support for policies designed to promote economic adjustment. More narrowly organized business interests are far more likely to try to shield themselves from the costs of competitive adjustment. The cases of Japan, West Germany and France set them apart from the United States, Canada and Britain. In each of the first three, business interests are built into the policy process. Whether it is through the system of committees in Japan, the social partnership and crisis cartels in West Germany, or the participation of industry in identifying the priorities of industrial strategy and the joint ventures between public and private capital in France, there are countless indications of the closeness of industry-government relations in these three nations. [Dyson and Wilks, 1983; Pempel 1982]. In each case, the state does not act in isolation in its efforts to cope with economic decline and adjustment.

Beyond these general characteristics and specific sectoral cases described in the earlier chapters, there is little that permits us to specify with confidence the role of business in the adjustment process. It cannot be assumed that all business interests seek to retard adjustment. [Mahon and Mytelka, 1983; Destler and Odell, 1988; Milner, 1987] or that the strength of a group's influence can be necessarily predicted from organizational characteristics. For example, high industry concentration can be viewed as an indicator of low communication costs, fewer free rider problems and a greater ability to secure protection [Pincus, 1975]. Alternatively, industry concentration also facilitates the establishment of crisis cartels and the sectoral reorganization plans that have conduced to positive adjustment in the case of the Japanese and German steel industries. [Esser and Fach, 1984; Kikkawa, 1983]. Similarly, the rather closed system of circulation of elites between business and government is used in the cases of France and Japan to explain ease of communication and an ability to develop policies for collective gain [Gollner, 1985; Pempel, 1982] At the same time, in the cases of Canada, the U.S. and Britain, close personal ties between industry and government are used to explain the special access of business interests and the favourable treatment of these interests at the expense of others. [Grant, 1984; Solomon and Sigfried, 1977] The fact that seemingly similar organizational characteristics can be a basis for political demands for protection _or_ for promotion of adjustment points to the importance of the broader political context.

In considering private sector organizations, two distinct portraits emerge. The first emphasizes the virtue of encompassing or peak associations that internalize the costs of policy choices and are likely to pursue adjustment promoting objectives. The second perspective derives from the workings of more fragmented or narrowly based interests. Public choice analysis suggests that those interests with high stakes in particular policy decisions will dominate over more diffused consumer interests. However, this collective action problem does not always mean the triumph of protection. Internationally-oriented firms interested in resisting protection may see significant benefits at stake and are likely to act in pursuit of those benefits. [Milner, 1987, p. 651; Destler and Odell, 1987]

Comparative analysis reveals there is no simple law of politics at work. [Baldwin, 1985; Destler and Odell, 1987]. Governments have not always opted for policy instruments that favour concentrated protectionist interests. In order to understand when adjustment retarding interests are most likely to prevail it is necessary to examine characteristics of the political arena and the nature of the political process.

III. THE SUPPLY OF ADJUSTMENT

The supply of adjustment policies turns attention squarely to the role of the state. This raises questions regarding both the incentives and constraints on policy-makers. The supply of adjustment-oriented policies would appear to be more likely if the political system is organized so as to make it more difficult for narrow interests to prevail. Is there a political logic that explains why some political systems are more vulnerable to the demands of narrow interests? Is there a political logic that explains why some governments are better able to focus on aggregate national welfare gains and to encourage adjustment to economic change? In terms of the prisoners' dilemma the question is why are some political systems able to act cooperatively? Often such questions have been answered by reference to the notion of consensus. Cox in Politics, Policy and the European Recession makes the argument

> "Clearly the message for the declining economies is that unless they can generate the corporatist and consensual relationships between business, finance and labour which have been generated in the relatively prosperous nations, then the prospects for the 1980s are bleak" (1982, p. 30).

Similarly, McKay and Grant find that the pursuit of adjustment depends in part on a "broad acceptance among political elites of the need for government to play an active role in helping industry adapt to change" (1983, p. 9). However, as Blais [1986, p. 20] states, consensus is a superficial explanation unless its origins are examined. It remains to be explained why there are different attitudinal reactions to government intervention in different countries. Even if we acknowledge the potential importance of consensus in shaping policy choice, knowing how much weight to assign to it is exceedingly difficult.

Institutional analysis attempts to identify the systematic characteristics of the domestic policy-making system that translate political pressures into policy. As was apparent in previous chapters, there is a mixed record of protectionist and adjustment responses within nations as well as across them. Under what circumstances will domestic political factors generate policies consistent with overall social welfare? What are the characteristics that shape the likelihood of protectionist responses to decline?

It is a singular failing of Mancur Olson's framework that his portrayal of the determinants of economic growth trivializes the role of the state [Krasner, 1984; Rogowski, 1983; Dean 1984]. For Olson, variation among governments is consigned to a single variable-the length of democratic stability. [Mueller, 1983] As noted in the discussion of the demand for adjustment, Blais and McCallum's [1986] testing of Olson's thesis finds that the variable "institutional sclerosis" is negatively related to economic growth. It is, however, never specified what aspects of state structure or governmental functioning are tapped by this variable nor what positive model of the policy process underpins the concept. As it stands, Olson's framework and its several applications treat each political system as a generic, passive register of group activity. Identifying the public sector attributes that seem important in shaping an institutional capacity to supply adjustment policies requires further consideration of the relationship between institutional arrangements and political conflict.

Corporatist, tripartite arrangements among business, labour and government have been singled out as an institutional basis for supplying the collective good of economic adjustment. [Katzenstein, 1985] Corporatist policy formation is characterized by extensive bargaining between government and organizations of business and labour and the participation of these associations in the implementation of policy. A key feature for each of the social partners is the centralization of economic and political authority. [Banting, 1985, p. 7] All three partners take on an encompassing representative function. The apparent economic success of countries relying on corporatist processes has been explained in large part by the inclusive, consensual nature of the corporatist system. [Goldthorpe, 1984] They are more likely to internalize the costs of policies. The political process is thus marked by a longer term, more broadly conceived perspective on the economy.

In identifying institutional solutions to the prisoners' dilemma problem, it is possible to draw upon some of the insights of the corporatist literature that bring to the fore a number of important institutional characteristics of the state. It would seem that a high degree of integration of the policy formation responsibilities in public and private sector institutions is conducive to wealth maximizing adjustment policies as opposed to protection [Trebilcock, 1985; Chandler 1985]. These characteristics which are typically associated with corporatist systems can also be considered in evaluating the institutional capacity of pluralist systems to supply adjustment policies. In the analysis of institutional capacity, two organizational characteristics have received the most attention: the degree of coordination and centralization of bureaucratic responsibility and federal versus unitary structures. In each case the focus is on the impact of the dispersion of responsibility and the interdependence among governmental agencies, and/or levels of government [Atkinson, 1986; Zysman, 1983; Bakvis and Chandler, 1986; Jenkin, 1984; Thorburn 1984; Prichard, 1983]

A. BUREAUCRACY

Coordinated and centralized responsibility for adjustment policy are deemed significant in two respects. Zysman argues that strong administrative structures determine a government's capacity to construct economic strategy and to mobilize economic resources to serve it. [1983, pp. 300-309] For example, the French Inter-ministerial Committee for the Adaption of Industrial

Structure (CIASI) included ministers and top-level public officials and bankers. The committee was able to deal quickly and efficiently with the problems of failing firms (Green 1983 pp. 176-77). The French CODIS (Interministerial Committee for the Development of Strategic Industries) is another example of a highly centralized structure. The Committee, made up of key economic ministers, was established in 1979. It is chaired by the prime minister but has no separate budget. Its purpose is to steer the development of strategic industries and to coordinate the various instruments of intervention. Japan's MITI (Ministry of International Trade and Industry), established in 1949, also exemplifies centralization and coordination. MITI has wide-ranging responsibilities, but although it has a comprehensive perspective, it is not unconstrained. While it is clear that its impact varies across industries, there is little doubt that MITI is the "focal point in industrial policy determination, lending to continuity and consistency" (Magaziner and Hout, 1981, p. 33) In the absence of government's capacity to formulate policies of adjustment it may be more vulnerable to external pressures for protection.

The importance of organizational capacity to promote adjustment need not be predicated always on a highly interventionist view of adjustment. Although some commentators [Zysman, 1983; Magaziner and Reich, 1982] point to the importance of government in actively promoting structural change, there is also much emphasis on developing the organizational capability to counteract political support for protection. Baldwin (1985) argues that certain institutional changes in the U.S. have reduced the ability of pressure groups to secure protection in particular industries. These changes have entailed not only shifting tariff setting authority from Congress to the President. They also involved constituting the International Trade Commission (ITC) a quasi-judicial agency that plays an important part in determining industry-specific levels of protection. The President and the ITC are much less vulnerable to industry-specific political pressures than Congress [p. 178] Destler (1986) in American Trade Politics makes the case for strong administrative capability so that government policy is not simply a function of the balance of outside pressures.

> "Their [U.S. trade officials] posture should be one of knowing where they want the trade policy train to go, and one of political capacity to steer it in that direction, together with readiness to plan and execute the journey in ways that maximize the gain and minimize the pain for special interests. Only then will private actors find it in their advantage to climb on board. Only with a balance of strength and responsiveness can trade leaders cope effectively with the inevitable pressures of an internationalized American economy" [p. 220-221].

When decision-making responsibilities are diffused, narrow groups are more able to penetrate the policy process and to exploit cleavages among competing agencies and departments. The importance of coherence and coordination of responsibility is not that it necessarily leads to more state intervention. Whether adjustment relies on state or market forces will depend on many characteristics of the political systems [Gourevitch, 1986]. Indeed strong executive capability is as important for fending off demands for intervention as it is for mobilizing public action. Ikenberry (1986) argues that "reimposing the market may be as powerful an expression of state capacity as intervention. The capacity to resist intervention and to maintain market forces is as important a part of public policy as direct intervention." (p. 135) Centralization of authority appears to be important in promoting policies which produce instruments compatible with broadly based notions of national interest because the diffusion of responsibility for policy-making detracts from the clarity of understanding of the costs and benefits of protection. This lack of clarity, which is likely to be accompanied by attenuated accountability, provides greater opportunity for special interests to influence policy and enlist "clientele" institutions of government.

B. FEDERALISM

The capacity of federal systems to respond to changing international and domestic economic imperatives raises another question concerning the fragmentation of political authority. Does the dispersion of power and greater interdependence between levels of government necessarily spell policy incoherence and vulnerability to special interests? Are federal states less able to produce adjustment-promoting policies?

The problems of economic adjustment have exposed two competing views of federalism. One interpretation stresses the advantages of decentralization, multiple decision-points and access in terms of the capacity to respond to diverse interests, to experiment, to adapt to changing conditions and to avoid the institutional rigidities held to be characteristic of modern bureaucratic unitary states. Albert Breton's model [1986] of competitive federalism best articulates the view of federal divisions as a political resource conducive to flexibility and responsiveness.

Other views of federalism are less convinced of the positive effects of competition among jurisdictions. [Tupper, 1986] Proponents of a the second view contend that while in an era of prosperity and economic growth a reactive crisis-management style of decision-making may be both popular and reasonably successful, in a period of economic crisis an expanded state capacity for coordinating or directing government activities across several sectors and jurisdictions is a necessity. It is argued that the dispersion of power in a federal system and the necessity of seeking consensual solutions among a large number of policy actors combine to inhibit the prospects for effective economic strategies. [Thorburn, 1984] This implies that the pattern of industrial policy is more likely to be composed of a series of ad hoc actions and uncoordinated initiatives between federal and provincial levels of government, all of which spell a policy pattern lacking in coherence and comprehensiveness. Thus, because federal regimes are decentralized and because bargaining and consultation constitute the essential activity of power-sharing between levels of government, it has been argued that they are unsuited for coping with the challenges of intense international economic competition.

This latter critical view of federalism is premised primarily on what Zysman (1983) calls a "state-led" notion of adjustment in which government bureaucracy attempts to bring about adjustment by directly influencing the future of particular sectors (p. 91). To the extent that adjustment is viewed in this way, the capacity of the state to promulgate and impose a coherent strategy of state manipulation of the market may well be inhibited by the dispersed decision-making associated with federalism. A related problem from this perspective is that the dispersion of power in federal systems may induce private sector groups to develop fragmented, decentralized organizations which arguably exacerbate the absence of an encompassing public sector perspective on policy-making. [Coleman, 1988] Moreover, if conflicting relations between levels of government come to dominate policy-making, less attention can be devoted to improving the relations between labour and business.

If the object is to enhance the capacity for state-led adjustment in a fragmented federal system like Canada's, at least some simple reforms are necessary. Drawing on lessons suggested by the West German experience and by basic elements of game theory (Axelrod, 1984) we have suggested elsewhere that institutional arrangements are more likely to be successful if they

> (a) have a small number of agenda issues; (b) have a small number of players; and (c) consist of repeat players with long-term involvement in the issues. That is, the federal-provincial structures that hold out promise for more coherent development of economic policy in a federal-provincial framework might (a) focus on reaching accords on, for example, certain classes of interprovincial barriers to trade; (b) involve senior appointees of government with some permanence of tenure and with professional or technocratic expertise in the subject area, who would temper transitory considerations of political expediency with greater continuity in decision making; and (c) meet regularly and privately.
>
> Chandler and Trebilcock [1986, p. 195]

If a more neutral model of adjustment is considered, one which leaves open the question of whether the state or market should be the primary allocator of the costs and benefits of change, then the question of the impact of federalism can focus on the differences in the capacity of government to withstand the rent-seeking demands of narrow interest groups. Put more positively, the focus will be on the ability of the political process to produce instrument choices in keeping with societal interests and the normative values of the citizenry. If viewed from the perspective of whether the political process allows public appreciation of the relative costs and benefits of different policy instruments, then the qualities of federal systems can be quite attractive. As Prichard (1983) points out, overlapping and concurrent jurisdictions may permit "more precise registration of citizens' demands from governments. Overlap in other words, increases opportunities for signalling.... Overlap gives individuals more opportunities to remedy, moderate or avoid harmful consequences resulting from the policy preferences of others." (p. 45) Prichard also points out that overlap may contribute to public information and understanding of policy issues:

> "Issues under consideration appear to receive more exposure than might be the case if they were being handled within one jurisdiction. Public information may be improved by the focusing of resources by both the media and the governments involved. Government participants have sufficient resources and self-interest to make investment in analysis and information worthwhile. Finally, delays which are often attributed to the complexity of intergovernmental co-ordination may also increase opportunities for citizen involvement in decision-making." [1983, p. 43]

In sum, federalism may present some institutional impediments to those who seek state directed adjustment. However, federalism does not automatically mean the triumph of narrow interests. Indeed, federal systems may be able to tailor and adopt policies to produce outputs more reflective of the ethical pluralism that characterizes liberal democracies.

There is no simple answer to the question of which set of institutional structures are most conducive to the formulation and implementation of policies favourable to economic adjustment. Throughout this study we have seen that there are important differences among countries in their efforts to cope with industrial decline. Some political systems have been far less likely to respond to competitive pressures with trade protection and unconditional subsidies. Japan, Sweden, and West Germany have the most consistent records of opting for adjustment-promoting instruments to deal with competitive pressures on the industrial sectors reviewed in this study. Conversely, Britain, Canada, Australia and the U.S. have been much more likely to choose protection. However, no nation in our sample group has been immune to protectionist pressures.

The structural capacity of governments to supply policies that promote rather than retard adjustment has been considered with regard to the degree of integration across agencies and bureaus at the national level and the degree of cooperation and integration between levels of government. If the fragmentation of responsibility means attenuated accountability and limited general understanding of the costs and benefits of alternative policy choices, then this leaves fragmented systems more susceptible to demands for protection. If a federal system can maintain accountability and accessability at both levels of government, federalism can reduce the likelihood of protectionist outcomes. In order for government to have the crucial ability to fend off narrow rent-seeking demands, the policy process must provide a forum in which all interested parties can speak to the consequences of alternative policy choices.

IV. **ROUTES OF ADJUSTMENT**

If the relationship between resource mobility and national economic wealth is valid, why have all countries not consistently adopted wealth maximizing policy instruments? Can institutional characteristics explain, at least in part, differences in the choice of policy instruments for responding to adjustment pressures? Analysis of political processes yields some answers to these questions. First, within the ethical mainstream of advanced industrialized societies, there are multiple values; the objective of economic efficiency (and growth) exists alongside other concerns. These concerns centre on the distribution of benefits and costs, employment stability, and the preservation of communities. These values and their weighing by citizens and politicians must be reconciled by the political process in responding to adjustment pressures. This ethical pluralism may well mean that the political system will opt for a more tempered or gradual route to adjustment than one dictated solely by economic efficiency.

However, the evidence in each of the three previous chapters indicates that despite appeals to various ethical objectives, these objectives are rarely attained. Protectionist policies in the name of job and/or community stability entail enormous and disproportionate costs. Empirical analysis of trade and subsidy instruments reveals that those nations with poorer economic performance, those less able to adjust, have selected policies in which ethically attractive objectives cloak rent-seeking and adverse welfare outcomes. These outcomes are in part the products of dysfunctions in the political process which generate the triumph of narrow, adjustment-retarding interests over broader conceptions of national welfare. It is in the political process that competing interests are resolved. To the extent that the democratic political process is structured so as to undervalue the broad consumer interest this, in our view, is evidence of a failure of the political market. Examining political institutions in a comparative framework permits identification of those factors that impede the understanding of the real costs and benefits associated with different policy instruments. Arguably, it is this lack of clarity that is in part responsible for successful rent-seeking and outcomes incompatible with widely held policy objectives. We have examined some of the linkages between patterns of policy and the institutional capacity of the political system. The analysis of the supply and demand for adjustment yields no iron law of politics that determines the pattern of policy according to public or private sector attributes of the political system. However, the analysis does reveal some important clues as to which institutional characteristics are most conducive to policies that are consistent with economic adjustment.

A. CORPORATISM

Review of comparative experience points to two routes to adjustment; one through corporatism and the other through pluralist political orders. The relatively successful economic performance of corporatist systems is well established [Katzenstein, 1984; Goldthorpe, 1984; Pempel, 1982] Protection is less likely when sectoral adjustment is tied to a larger perspective on the economy. The centralized and concentrated system of interest groups and the negotiation and coordination that characterizes the political process generates an inclusiveness and an internalization of the consequences of economic dislocation. Goldthorpe [1984, p. 324] points out corporatist arrangements afford governments the possibility of promoting the concentration of different interests which could otherwise be expected to compete or conflict in ways detrimental to the achievement of social objectives. Essentially corporatism is an integrated organizational route to adjustment. Within the corporatist system, capital and labour organizations forge their own consensus and come to the political arena with a single voice. In order to deal with its highly organized social partners, responsibilities within the state tend to be sharply focussed.

The theoretical appeal of corporatism and the relative economic success of Sweden, West Germany and Japan have led some analysts to urge on other political systems the development of more encompassing institutions. However, there are severe uncertainties surrounding the transplantation of foreign institutions to other political, cultural and ideological settings. Importing the institutions of other nations is not a realistic prescription; political institutions are part of a complex cultural, economic and social network. What works in one particular case may not be transferable to a different national setting.

B. PLURALISM

Pluralist systems are characterized by adversary/competitive politics in contrast to more integrative and accommodative corporatist political orders. [Dyson, 1980, Chapt. 2] In pluralist systems it is the quality of that political competition that is crucial for the production of instrument choices compatible with the consumer interest (broadly defined). In pluralist, as in corporatist systems, the promulgation of adjustment policies consonant with the values and welfare of the political community depends on the ability of the political system to facilitate an understanding of the relative costs and benefits of alternative policies. The less understanding of the relative merits of alternatives, the more likely that narrow interests will prevail and the policy process will yield economically and ethically perverse outcomes. In order for the state to posses the ability to fend off rent-seeking interests, the policy process must include a public forum in which the costs and benefits of alternative instruments can be evaluated. Some have argued that this implies a national strategy or plan. We disagree. State-led adjustment may provide a route for the revelation and evaluation of policy costs. However, nothing in our findings supports state-led adjustment as the only avenue of adjustment. National adjustment capability is not predicated on a choice of state over market. National adjustment capability comes from the capacity of the political system to foster understanding of the costs of policy choice. This understanding can be developed in several institutional settings. What is fundamental is that the particular arrangement allow for the revelation of the costs and benefits of protection, The inclusive nature of corporatism with encompassing private sector organizations and a tripartite relationship with government tends to give the corporatist political order that capability. In a more fragmented pluralist political order, this ability depends on the transparency of the process, the subsequent mobilization and participation of potential losers from adjustment-retarding policies and ultimately the accountability of decision-makers.

C. CONCLUSIONS

The political system is the framework for the settlement of the distribution of the gains and pains from economic change. Some nations have been better able than others to meet the challenge of accommodating concerns for economic and social security and justice with the pressures of economic change. The institutional analysis advanced here does not assume that economic efficiency is the sole legitimate objective of governments; it does not presume that any one ethical paradigm should prevail or that the political system should be restrained from helping those who stand to lose from change. A democratic political system should be able to reflect and to attach appropriate weights to the normative objectives of its citizenry. The institutional analysis advanced here does not find that adjustment depends on one particular socio-political organization of interests or one governmental structure. Instead the analysis focusses attention on the policy environment in which social interests operate. The principles of transparency, participation and accountability are the common basis for adjustment promoting policies across diverse institutional settings. The more these characteristics are absent from the political process the more likely that narrow protectionist interests will prevail.

In summary, although institutions are by definition stable structural traits an institutional perspective need not condemn policy-making to a continuation of the shortcomings of the status quo. Positive analysis of the limitations and opportunities generated by existing institutions is a first step in developing more adjustment-oriented policies. The second step is not however to seek the adoption of any particular set of political institutions. There is no single institutional route to adjustment, nor is there an iron law of politics that dictates particular policy outcomes. The leeway that exists within institutions and the possibilities of incremental institutional or policy change are the real bases for reform. The most promising route to greater economic adjustment does not seek to borrow the institutions of other systems nor does it seek to produce specific policy outcomes but focuses instead on process characteristics that will enhance the information and political participation of potential losers from adjustment-retarding policies.

6 CONCLUSIONS

I. Introduction

Given the economic inefficiency of protectionist policies, and the proven welfare gains to trading nations from post-war trade liberalization (Katzenstein, 1985), the rise of the New Protectionism would seem an ominous, if not regressive trend in contemporary history. Such reversals of liberalization have occurred before (the 1930's for example), with grave consequences for global economic welfare (Milner, 1988). Yet despite the increased use of subsidies and quantitative restrictions to protect declining industries n the 1970's and 80's, the total amount of world trade has actually continued to increase at a modest rate and shows no sign of declining (Milner, 1988; Gilpin, 1987). Indeed, given the pressures to protect jobs under the recessionary conditions of the mid-and late-70's, the extent to which the liberal trading order has remained intact may be remarkable, when compared with the consequences of similar pressures at earlier historical junctures (Milner, 1988).

Moreover, the choice of policies which do not maximize economic efficiency does not suggest, in itself, any bias or irrationality in the political process. Demands for intervention usually stem from non-economic values and interests which have a legitimate place in the policy calculus. From each of the three ethical perspectives outlined in Ch. I of this study (utilitarianism, social contractarianism, and communitarianism) there is an argument for government intervention to address trade-induced employment dislocations. The argument rests on the consequences of such dislocations for workers, their families and their communities. While a total disregard of the consequences of policies for economic efficiency would clearly constitute a forum of folly, it is entirely understandable that voters will make some sacrifice of efficiency in order, for example, to preserve community stability or enhance social justice.

The findings of this study suggest that where the dysfunction in the policy process lies is in the choice of instruments often employed to vindicate the non-economic ethical goals of protection. Utilitarian, social contractarian, and communitarian ethical theories are all compatible with "net benefit maximization" (Reich, 1988): since there are scarce resources available with which to achieve legitimate public ends, the particular benefit sought by a given policy should be achieved at the least economic cost, and with fewest harmful side-effects to other legitimate policy goals. Assuming net benefit maximization, the preference for quantitative trade restrictions which is typical of the New Protectionism, is irrational from any of the three ethical perspectives. These restrictions typically cost consumers an amount per job saved far in excess of the full wage in the industry. A 100% labour subsidy would be a less costly means of assisting workers, and would still vindicate communitarian values by preserving employment opportunities within a given community. Utilitarians and social contractarians would likely be satisfied with even less costly policies than an employment maintenance subsidy -- compensation to workers for the costs of searching, retraining, and relocating for new employment would be an optimal response.

From a social contractarian perspective, one must reckon also with the fact that many of the protectionist policies reviewed in this study are not addressed to the least advantaged -- job preservation in industries such as steel and autos, where wages are high and workers are represented by powerful unions, seems contrary to Rawls' difference principle, inasmuch as many of the taxpayers and consumers who end up paying the bill for such policies are less economically advantaged than those benefitted. Of course, the least advantaged do not necessarily buy much steel or many autos, but the price of these goods affects the costs of many other goods and services, and the results are felt throughout the consumer economy. In the case of textiles, clothing and footwear, low-income domestic consumers are directly disadvantaged by restrictions on lower priced foreign imports. From all three ethical perspectives, furthermore, a preference for trade restrictions that confer windfall benefits (rents) on the shareholder/owners of firms, would seem redistributively perverse. There is no ethical case that firms should be compensated for the costs of adjustment. From a utilitarian point of view, the rent-seeking behaviour induced by the availability of such benefits represents a waste of scarce resources (e.g., costs of lobbying politicians, hiring lawyers to demand administered protection, etc.). Furthermore, in the case of VER's and some quotas, the scarcity rents conferred on foreign producers represent a pure loss to aggregate domestic welfare. From a Rawlsian contractarian perspective, transfers of wealth from taxpayers and consumers at large to shareholder/owners, who almost by definition constitute a privileged sub-group in the polity, is redistributively regressive. Undesirable from a communitarian perspective is the fact that the rents in question often will not be used to preserve employment in the community but rather will be channelled into overseas investment or into modernization which increases capital-intensity of production, and hence leads to further shedding of labour.

In addition, stay-oriented policies -- whether trade restrictions or industrial subsidies -- have often failed to achieve their goal of preventing massive and sudden exit of labour from declining industries. Indeed, inasmuch as they have functioned to artificially postpone change, such policies may, if anything, actually exacerbate the severity of the disruptions when they finally occur. The appendix to this study details some of the spectacular employment losses in industries where adjustment-retarding policies had been persistently attempted at enormous cost: in the 1976-1984 period, employment in the UK steel industry fell by 50.5%; in the French coal industry by 32.1%; in the Swedish textile industry by over 70%.

II. The Margins of Rational Choice

This study has suggested that certain instrument choices are much more capable than others of reconciling economic efficiency goals and a plurality of the ethical perspectives. From an economic point of view, tariffs in general are less economically pernicious than global quotas, and global quotas are less pernicious than discriminatory quantitative restrictions like VERs. This ranking is consistent with all three ethical perspectives: the scarcity and/or cartelization rents which characterize quotas and VERs represent an unjustified transfer of wealth from domestic consumers to domestic and foreign producers (see above pp. VI - 1-3).

With respect to industrial subsidies, an economic perspective would suggest that subsidies which provide incentives/compensation to firms to exit from declining industries are the least undesirable instrument. Utilitarians and social contractarians would question, however, the ethical justification for compensating firms for the negative effects of economic change. Communitarians might prefer the economically much more pernicious instrument of production subsidies, as they guarantee maintenance of employment in a particular community or region. From all three ethical perspectives, subsidies for modernization would be acceptable if in fact they led to preservation of jobs in a revitalized, newly competitive industry. However, the evidence presented in this study suggests that where industrial policy has focused on modernization or rationalization, the productivity gains have largely been realized through shedding of labour by substituting capital. Since from all three ethical perspectives the dislocation effects of change on workers, their families and communities are of paramount importance, there is reason for concern that modernization subsidies may not in fact retard, or may even accelerate such dislocation effects. A form of subsidy consistent with all three ethical perspectives would be an incentive to non-declining firms within a given community or region to retrain and employ displaced workers. Assuming new permanent jobs were thus created, this kind of subsidy would be preferable from an economic perspective to production subsidies to the declining industry, as it would be broadly consistent with the exit option.

With respect to labour market adjustment, the economically optimal instrument would be adequately funded adjustment services, encompassing training, retraining, mobility and counselling benefits, as well as income support during the job search process. Such assistance would also be consistent with both the utilitarian and social contractarian ethical perspectives, which view compensation to workers for the real costs of change as the principal goal of industrial policy. From the communitarian perspective, however, adjustment assistance which emphasizes mobility of labour between communities and regions will be counter-indicated. However, adjustment assistance policies which focus on successful relocation of workers within a given region or community will be consistent with communitarian goals. From an economic perspective, public sector job creation and income support tied to continued employment of workers in the declining industry are clearly inferior to adjustment assistance. While communitarians in particular may have an inclination to favour these policies inasmuch as they keep workers employed within a given community, such policies do not address the long-term economic viability of the community and they threaten to create permanent dependence on public assistance. Communitarians must be concerned not only about the preservation of community life, but about its future quality.

This ranking of instruments from the economic and diverse ethical perspectives considered in this study suggests that some instrument choices are inferior from all perspectives (i.e. discriminatory quantitative restrictions such as VERs). However, the relative desirability of many of the other instruments considered varies depending upon the perspective adopted. Policy makers must take up the challenge of finding a mix of instruments which more adequately reconcile economic efficiency and a plurality of ethical goals in the particular circumstances of the case.

For instance, in a small community in Québec where a textile plant employs a large, middle-aged, mainly unskilled workforce, and where few alternative job opportunities exist within the same locality, trade restrictions or job maintenance subsidies may be the only means of vindicating communitarian goals. In other situations, where a declining firm has a diverse workforce of young, middle-aged and older employees, and where some employment alternatives exist within the community, the margins are wider for a creative instrument mix. The younger workers might be offered adjustment assistance to relocate elsewhere or retraining for other jobs within the same community; some, after all, will probably prefer enhanced personal opportunity over community ties. The middle-aged workers might be given jobs elsewhere in the community through an employment creation subsidy, and older workers could be offered an early retirement package, partly subsidized by government.

The existence of these under-utilized margins for more rational choice in domestic policies challenges the frequent characterization of the New Protectionism as a failure or dysfunction in the international liberal trading order, with national self-interest triumphing over global welfare and international legal norms (see for example, Trade Policy Research Centre, 1984; Keohane, 1985). Nor can the New Protectionism be characterized as a conscious social choice for justice over economic efficiency, since the policy outcomes chosen are often sub-optimal from both economic, and from mainstream non-economic ethical perspectives. This evokes a dysfunction in the domestic political process, which produces instrument choices incompatible with any widely-held normative concept of the national interest.

The appropriate starting point for reform would therefore be analysis and correction of those aspects of the domestic policy process that produce measures which have relatively high domestic costs and relatively modest, illusory, or redistributively regressive benefits, and which lead to a preference for more over less costly instruments to achieve given objectives.

The classical "public choice" or "economic" theory of politics, however, would seem to suggest that what is at issue is not a correctable dysfunction, but an iron rule of politics which predicts the inevitable triumph of some kinds of interests over others in the domestic policy arena (Downs, 1957; Olson, 1965). Domestic interests that benefit from protection (above all, producers who capture high rents from trade restrictions) normally win out over those harmed by such measures because the producers have more at stake individually in each trade policy decision, and hence will commit more resources to influence government than ultimate consumers (Olson, 1982). Hence, at the domestic level as well the fight for liberalization is lost even before it begins.

There are a number of reasons to question this fatalism. First of all, as Blais suggests, the view that consumer interests lose out because they are dispersed and difficult to organize is "usually presumed rather than demonstrated" (Blais, 1986; p.78). Our own examination of the public choice literature in Ch. II suggests limited predictive powers for the theory, and weighs against the assumption of rigorous determinism in politics. Governments have not proven unresponsive to consumer or other dispersed interests, whether product safety, retailing practices, or environmental protection. In such areas, pro-consumer policies have frequently been adopted, even at considerable cost to supposedly better organized and more highly concentrated producer interests.

But perhaps most importantly, the recent work of Destler and Odell, who have studied the outcomes of many recent trade policy debates in the United States, has focussed attention on the fact that there are a number of concentrated interest groups which are harmed by protection, such as domestic producers who use imports as inputs in production, importers, distributors, and retailers who specialize in selling low-price clothing and other goods where availability of foreign (particularly NIC) products is vital to commercial success (Destler and Odell, 1987). Destler and Odell argue that at the legislative and executive level of policy making, anti-protection interest groups do sometimes win out over pro-protection groups on product-specific trade issues.

Moreover, where more costly measures are chosen over less costly alternatives, a different political dynamic may be at play. Policies tend to be accepted or rejected by voters on the basis of the purported goals or values which drive them -- voters at large are not adequately supplied with the information necessary to assess whether in fact the specific policies mandated are likely to achieve their stated objectives, much less whether there might be less costly, more efficient alternatives. Indeed, often the specifics may be left to future administrative determination, and at that level rent-seeking behaviour and not the original ethical or economic objectives may determine their actual shape and impact. Pro-protectionist interests can invoke a variety of quite legitimate ethical principles to support adjustment-resisting policies, such as maintenance of community stability or the importance of jobs to a given region, without having to worry excessively about close scrutiny of the actual link between justificatory principles and actual results.

Any proposal, however, to reform the domestic policy process to allow a fuller public appreciation of the relative costs and benefits of different policy instruments would still be vulnerable to the following objection: why would governments, which have a natural interest in hiding the full costs of policies from those who bear them, support measures designed precisely to enhance the visibility of those costs? As Petersmann asks, "Is it Utopian to assume that . . . rent seekers may be prepared to accept domestic . . . review for their own 'grey area' trade measures?" (Petersmann, 1986; p. 83).

III. The Domestic and International Politics of Institutional Reform

Rowley and Tollison have described the question of how institutional reform can occur in a biased polity as "an as yet unresolved problem in public choice" (Rowley and Tollison, 1986). One answer, suggested by James Buchanan, draws on the distinction between constitutional and ordinary political change. With respect to constitutional change, it is necessary for the polity to agree to alteration of rules which render legitimate individual policy outcomes. These rules, such as the majority voting principles, are of such generality, or depend upon principles of such generality, that it is impossible for specific interests to predict with certainty the extent to which the rules will benefit or harm them over an indefinite series of individual plays (Buchanan, 1975; Brennan and Buchanan, 1985).

Not all rules, of course, have this constitutional character -- as Destler and Odell point out, in the case of specific rules concerning trade remedies concerted interests have a precise and strong sense of how changes in the rules will affect their interests (Destler and Odell, 1987). By contrast, however, rules and institutions which promote transparency and broad public participation in the policy process may have a "constitutional" character. Even though not entrenched so as to be immune from normal legislative action, such rules and institutions appeal to principles of democratic politics (such as open government) which transcend the specific conflicts of interest and values in the trade policy process. While as producers of products threatened by import competition, firms may benefit from covert policy processes and constraints on participation in those processes by dispersed interests, as taxpayers or subjects of government regulation (e.g. environmental or labour regulation) they may stand to lose heavily under a constitutional order where openness and participation in government are not mandated. It is therefore unclear whether pro-protection interests would in the long term realize a net benefit or a net loss if they were to succeed in opposing the principles of openness and participation.

Of course, it might be argued that the optimal strategy will not be to oppose the principles as such but merely their application to the trade policy field. But here, precisely because at the constitutional level the debate focuses on general principles and values, to what principles and values could pro-protection interests appeal in order to justify or legitimate the exception? As suggested by the recent introduction of Access to Information legislation in many jurisdictions, as well as by expansion of access to the regulatory process to dispersed interests such as environmental and consumers groups, there is a significant political market for greater transparency and accountability in the political and regulatory process (for a survey of these trends, see Evans, Janisch, Mullan and Risk, 1984; ch. 2).

Of course, the question could be asked why these trends have not already, of their own momentum, spread to the trade policy area. The answer may lie to a significant extent in the persistence of a popular mercantilist bias, which perceives the essential costs of protectionist measures as costs imposed on foreign trading partners and the benefits as accruing to the domestic national interest. This mercantilist model is embedded in the GATT system itself, which envisages the essential vehicle for trade liberalization as the trading of "concessions."

The mercantalist bias is also reflected in the rules and procedures of "administered protection" in most industrialized countries. Such rules rarely provide explicitly for consideration of the cost to consumers of imposing antidumping or countervailing duties, since such duties are viewed as responses to the "unfair" trading practices of a foreign producer, not as a redistribution of wealth from domestic consumers to domestic producers. (Finger et al., 1982; Howse, 1988). Even where the rules do permit consideration of the consumer interest, standing and disclosure requirements, and other aspects of procedure, in practice marginalize the consumer perspective and reinforce the image of antidumping and countervailing duty proceedings as an adversarial dispute between a foreign producer (who wants to export his product) and a domestic producer (who wants to protect his market and who claims the foreigner is acting unfairly) (Rugman, 1987; Howse, 1988).

The founders of GATT understood the neo-classical case for the domestic welfare gains even from unilateral trade liberalization, both in terms of the consumer gains and the overall efficiency gains through a more optimal allocation of resources (Dam, 1970). Reciprocity at a sophisticated level can be understood as a means of engaging domestic political constituencies for liberalization -- a concession from another country automatically creates a new interest group in favour of liberalization, the producers of the product for which the concession is being offered.

Yet in the popular imagination, reciprocity continues to be seen through mercantilist lenses -- the national interest is identified with domestic producers, and the domestic redistributive effects of policies (above all from consumers to producers) remain largely removed from public consciousness.

As Moore argues, it is ideas that establish "the context within which public policy is debated and executed . . ., they simultaneously authorize and instruct different sectors of the society to take actions on behalf of public purposes" (Moore, 1988; p. 75). Ideas can "unbalance and rebalance political forces," as has been shown in recent policy debates about issues as diverse as punishment of criminals, drug laws, drunk driving, and environmental protection (Moore, 1988). Reich observes that the way a given policy issue is conceptualized usually results in "the implicit selection of certain groups to participate" from among many potential losers and gainers. This insight seems particularly applicable to trade policy, where the mercantilist bias tends to marginalize the participatory role of consumers in the policy process (Long et al., 1987; Howse, 1988). Hence, the importance of intellectual and political leadership in educating voters at large that general principles such as openness in government should apply to trade policies as much as other forms of regulation (e.g. pollution controls and utility rates) which more self-evidently bear upon the interests of individual citizens.

At the international level, dynamics may be present which facilitate institutional reforms resisted by some interest groups in particular countries. In the Uruguay Round negotiations, where many substantive issues may prove intractable, progress on procedural and institutional reform may prove attractive to governments seeking to maintain momentum in multilateral negotiations, and to appear to their domestic publics as making genuine progress, but who nevertheless find themselves unable to agree on strong sovereignty-limiting substantive constraints.

Ultimately, there is of course no guarantee that the public choice dilemma described by Rowley and Tollison can be overcome. Yet the balance weighs against a fatalistic determinism, suggesting the influence of intellectual and political leadership on constitutional or quasi-constitutional outcomes.

IV. Mandating Domestic Transparency

Recognition of domestic procedural determinants of protectionist outcomes has led to a number of proposals for reform of the domestic policy processes which produce those outcomes. Most of these proposals focus on transparency in policy making and policy debate (OECD, 1983a; Leutwiler, *et al.* 1985). It is advocated that governments be required to regularly publish the costs and benefits of all forms of industrial assistance, whether subsidies, VER's, or tariffs. Most of the proposals suggest that the function of estimating these costs and benefits be performed by an agency, which although publicly funded would be independent of existing policy processes and perform a purely informational role (Carmichael, 1986; Long *et al.*, 1987; Corbet, 1986). A few recommend the expansion of the mandate of existing agencies or tribunals in the trade regulation field to incorporate this function (Destler, 1986; Economic Council of Canada, 1988). Moreover, a particular novel aspect of the proposals is that they generally would involve contracting parties binding themselves internationally, through the GATT, to provide domestic transparency (see especially, Carmichael, 1986 and Long et al., 1987).

The model cited in most instances for a domestic transparency agency is the Australian Industries Assistance Commission (IAC). Established in 1974 as an initiative of the Australian federal government, the IAC is not subordinate to any government agency or department, but operates pursuant to independent statutory authority (the IAC Act). The most distinctive feature of its mandate is that the Federal government is required to refer any proposed industrial assistance measures, except those of a temporary nature, for investigation before such measures are adopted into law (OECD, 1983a; p. 43). Assistance is defined extremely broadly as any act "that would in any way directly or indirectly, assist a person to carry on a business or activity or confer a pecuniary benefit on, or result in a pecuniary benefit accruing to, a person in respect of the carrying on of a business or activity" (quoted in OECD, 1983; p. 41). References require a public investigation by the IAC, including oral hearings, at which the various interests at stake, including consumers, are represented. No obligation exists whatever for the government to accept the IAC's recommendations. The IAC may initiate its own investigations, and is required to review existing programs on a periodic basis. In addition, the IAC must report annually the "amounts of protection afforded all industries, the economic performance of those industries and the effects of industry assistance on the economy" (quoted in Rattigan, 1986; p. 159).

The objectives to be used by the IAC in evaluating requests for assistance are also spelled out in a general way in the enabling legislation. These include: making the allocation of productive resources in the community more efficient; facilitating "adjustment to changes in the economic environment by industries and persons affected by those changes"; and recognizing the interests of consumers and consuming industries (Rattigan, 1986; p. 187).

V. Transparency and the Opportunity for More Optimal Adjustment Policies

In a number of respects a domestic transparency agency would address the main dysfunctions in the policy process identified in this study. First of all, by publicizing the costs to consumers of various protection instruments, the agency would be an important means of combatting the conceptual bias which leads voters at large to assume that it is the foreign trading partner which bears the main costs of protection. Even sophisticated voters may well be surprised -- as indeed were we -- to discover just how expensive trade protection really is, in terms of cost to consumers per job saved.

Secondly, while in the case of trade restrictions, there may be concentrated anti-protection interests which are well informed in the product-specific debates which most directly concern them (Destler and Odell, 1987), outcomes in many debates will affect such concentrated interests less directly, leaving the anti-protection argument to be carried by more dispersed interest groups (e.g. consumers) who face the free rider, collective action problems identified by public choice theory (Downs, 1957; Olson, 1982). A domestic transparency agency would at least reduce some of the information costs which such dispersed groups may be disinclined to incur due to such problems. And, moreover, with respect to subsidies, there will be few concerted interest groups opposed to subsidization. Since subsidization (unlike trade restrictions) does not increase domestic price above world price, domestic producers who use imports will be largely indifferent to subsidy policies.

Thirdly, the fragmentation of the policy process -- with different government agencies having responsibility for different policy instruments- - makes overall coherence in the choice of instruments highly problematic. We have seen a persistent preference for more costly (quantitative trade restrictions) over less costly (labour or industrial subsidy) instruments to achieve the same goals. This may to a significant extent be due to the rent-seeking behaviour of producers, who capture -- at consumers' expense-- higher rents from the more costly instruments. When a public comparison of the relative costs of all instruments is available, governments may be more reluctant to respond positively to such rent-seeking behaviour.

Fourthly, on-going scrutiny of the actual costs and benefits of policies once they begin to be implemented, and the comparison of those costs and benefits with the initial objectives of the policies, can counterbalance extravagant claims by proponents of intervention -- whether claims about job creation or the benefits of subsidized rationalization-- with a more sober estimate of the future returns from public assistance. Broad public support for many policies may be driven by unrealistic expectations about the capacity of government to resist, reverse, or retard market forces. These expectations are encouraged by the understandable tendency of bureaucrats and politicians -- either out of instinctive professional bias or calculated self-interest -- to make inflated claims for their own powers. One of the most prominent trends which emerged from our empirical analysis is the tendency for adjustment policies to fall far short of their purported objectives, particularly when these involve resisting, minimizing, or making more gradual, employment dislocation.

Finally, the prospect of independent public scrutiny should discourage governments from proposing pure "porkbarrel" assistance measures that would be profoundly embarrassing to the politicians once publicly disclosed. And ongoing surveillance of the full range of assistance measures would doubtless identify duplication and waste which even a government beholden to pro-protectionist interests might be desirous of eliminating.

VI. The Scope and Limits of the Transparency Function

Most of the proposals for internationally mandated domestic transparency measures emphasize the purely informational role of the proposed model agency (e.g. Long *et al.*, 1987; p. 36). However, as the example of the Australian IAC indicates, an "informational" function may in fact have folded into it several distinctive roles.

For example, the agency's deliberations on the costs and benefits of protection may involve extensive public consultations and hearings, directly empowering not only concentrated pro-protection but also more dispersed anti-protection interest groups (such as consumer groups) to participate in scrutiny of existing and proposed assistance measures. This participatory aspect to the agency's role, perhaps even more so than the reporting function itself, may lead to heightened awareness of the full range of interests at stake in adjustment policy debates, and contribute significantly to erosion of the mercantilist conceptual bias. Destler and Odell note that "up to the present, a major constraint on political participation on the anti-protection side, in product-specific episodes, has been that many companies, unions, cities and others who have a special interest in that particular trade decision have not been fully informed of their own interests in time to make a difference (Destler and Odell, 1987; p. 131). A transparency agency might be required to notify the full range of special interests affected of the proposed measures and invite and in appropriate cases, subsidize the costs of their participation (Engelhart and Trebilcock, 1981).

Secondly, there is a thin dividing line between providing information and providing policy advice. Should the transparency agency, in presenting costs and benefits, make policy recommendations on which measures, if any, ought to be adopted by governments? The Australian IAC is explicitly assigned this role, strongly reinforced by legal constraints which prevent government from acting before the IAC has completed its evaluation.

In fact, the very way in which costs and benefits are calculated or presented may represent a concealed, or even overt policy choice. Most of the proposals for a domestic transparency agency focus on economic efficiency as the basic measure of costs and benefits, excluding from the calculus the social costs and benefits recognized by the utilitarian, liberal contractarian and communitarian ethical perspectives (see, e.g. Long et al., 1987; p. 69).

In the case of the IAC, the exclusion of such claims, and a narrow focus on economic efficiency, led to a significant erosion of the public credibility of the agency, with pro-protection forces able to claim that its recommendations stemmed from a bias which disregarded or depreciated legitimate and widely held values, such as community stability (Howse, 1988; Glezer, 1980).

Once a transparency agency is recognized to possess its own distinctive bias, then the general "constitutional" principles of openness and participation cease to provide a convincing justification for its function. Rather than generating the most comprehensive estimate of the impact of adjustment policies and facilitating voice for the widest range of normative claims, the agency becomes itself merely another player in the game and loses its "constitutional" character.

Moreover, political support for less costly adjustment policies requires in practice that these policies be able to vindicate the variety of legitimate ethical concerns which underlie the justification for intervention. Exclusion of such concerns from the function of the transparency agency would substantially weaken its capacity to ameliorate the most dramatic policy-making dysfunction identified by this study -- the disproportion between the normative justifications for adjustment policies and the actual redistributive effects that many such policies actually have.

A related concern is whether a domestic transparency agency would be restricted to stating its views on the costs and benefits of existing or proposed government policies, or whether it would also have a mandate to propose alternative measures for consideration by government. The IAC has generally been content with the former, less expansive mandate since its neo-classical economic perspective does not suggest that there are any desirable activist adjustment policies. In our view, however, it would precisely be the capacity of the agency to present and publicize such alternatives (e.g. subsidies in lieu of VERS) that would facilitate adoption of what economists (often scathingly) refer to as second best policies--

i.e. those which vindicate non-economic values and interests at lower efficiency costs than the policies most preferred by rent-seekers.

In any case, an advisory role for the transparency agency, would -- if the advice reflected not only economic but other legitimate perspectives on adjustment -- have the advantage of essentially requiring a formal response by the government, and of publicizing in some instances alternative policy approaches, around which anti-protection forces (instead of merely decrying the logic of intervention) might plausibly rally broad public support.

VII. Creating an International Transparency Agency

Among the stated goals of the Uruguay Round of trade negotiations is, according to the 1986 Ministerial Declaration, "to enhance surveillance in GATT to enable regular monitoring of trade policies and practices of contracting parties and their impact on the functioning of the multilateral trade system" (GATT Secretariat, 1986). Although surveillance was envisaged to begin with as an important aspect of the GATT system, this role was at odds with the GATT's lack of a permanent, recognized institutional structure. As Dam notes, "in legal and institutional patrimony, the GATT is one of the most humble, if not deprived, of the multitude of international bodies on the current world scene" (Dam, 1970; p. 335).

Given a minimal institutional capacity for analysis and discussion of the data, it is not surprising that the reporting requirements in Art. XVI have not been taken seriously. Art. XVI (1) requires that the CONTRACTING PARTIES be notified in writing of any "subsidy, including any form of income or price support" which will have either a direct or indirect effect on exports or imports of the subsidizing country. According to Dam, this reporting was supposed to occur in detail each year, but is now rarely if ever complied with (Dam, 1970; p. 146).

In the Uruguay Round discussions, the Australian delegation has proposed that a formal surveillance mechanism be established within the GATT Secretariat, modelled on the IAC. Contracting Parties would be required to report all forms of trade action (including subsidies and VER's), to be converted to a common measure (News of the Uruguay Round, 10 Dec. 87). The proposal has, according to initial reports, been "well-received" by other delegations. Yet its intended scope does not yet seem entirely clear (News of the Uruguay Round, 27 May 87).

An international transparency agency might perform two quite distinct functions. First of all, it could supervise the implementation of internationally mandated domestic transparency requirements, as embodied in the kind of domestic agency discussed above. Such supervision could, for example, ensure that the techniques used by such domestic agencies do not themselves entrench bureaucratic or other biases, and reflect the full range of costs and benefits of policies.

Secondly, the agency might make its own estimate and evaluation of Contracting Parties' trade policies. This might even extend to judgments about the policies of the individual Contracting Parties, perhaps involving (to use an expression of Kenneth Dam) a "confrontation and justification procedure", whereby countries must answer for their policies. Such a role would be a significant departure from the traditional understanding of the GATT as a "non-institution", and already some Contracting Parties (unnamed in the official reports) have expressed concerns about review of individual countries' policy, as opposed to monitoring the overall global trading environment (News of the Uruguay Round, 3 July 1987; p. 5).

This second function would not simply duplicate the work of the domestic agencies, but would involve an analytically distinct task--estimating not the domestic costs and benefits of protection, but the impact of protectionist policies on trading partners and on global economic welfare. Indeed, such a task would seem appropriate for a GATT-based agency, given the focus of the GATT on reciprocity.

Here the Australian proposal that the international agency adopt the Effective Rate of Protection standard as a common measure of the costs of various instruments of protection may be misguided. The Effective Rate measures the artificial addition to value added which results from the policy in question. It thus gives an estimate of the domestic resource misallocation effects of assistance. Such an approach is well-matched to a mandate of determining the harm of protectionist and subsidy policies to domestic economic efficiency; hence its use by the Australian IAC. Yet it does not measure the purported harm of such policies to foreign producers of imports.

As Blackhurst notes, "international surveillance of trade policies tends to stress the harm done to a country by the trade policy actions of its trading partner. Domestic surveillance of trade policies, in contrast, focuses on the harm done to a country by its own trade policies" (Blackhurst, 1986; p. 215). Of course, this study argues for a heightened appreciation of the domestic welfare losses of trade policies, and hence the merits of unilateral reductions in the use of the most costly protectionist instruments. But, this being said, trading of concessions will likely remain politically important in expanding the set of domestic interests which stand to benefit from liberalization. The benefits which may be had from an international agency measuring against a common standard the losses to trading partners from various assistance instruments deserves some elaboration.

Take, for example, trade-impacting domestic subsidies. At present, the only widely used remedy is for the impacted country to impose a countervailing duty. The subsidy may well continue but the overall level of costly trade distortions will have increased. If it is known, on the other hand, that the trade effects of the subsidy are X, the impacted country would have the option to demand from the subsidizing country, not the elimination of the subsidy but compensation in the form of a net reduction elsewhere in trade effects equivalent to X. While the subsidizing state and its citizens might be indignant at the demand that they change their sovereign choices of government intervention and eliminate the subsidy, they could well react more positively to the notion that compensation (e.g. in the form of lower tariffs on imports in another sector) should be paid for harmful effects of their (legitimate) preferences on the welfare of others. Richardson, taking as a model the structure of GATT safeguard provisions, has explored at length the advantages of a compensation-based approach, given the unrealism of eliminating aid to sensitive industries, and the highly costly and distortive alternative of increased retaliation (Richardson, 1988).

VIII. The Focus on Transparency: A Retreat From Substantive Internationalism?

Our proposals for reform begin from the cautious assumption that substantive constraints on protectionist instruments are unlikely to be feasible at the current juncture in international relations, given domestic political imperatives of trading nations. Our judgment is very similar to that of a group of trade officials and analysts in a recent study of domestic transparency issues: "The history of the GATT provides ample testimony of how effective its negotiating rounds can be when there is a shared commitment and a willingness to act. The problem now facing GATT negotiations is that the shared commitment and willingness to act is not firmly based. The ability of governments to deliver on commitments has been seriously impaired for (reasons of domestic policy)" (Long et al, 1987, p. 64).

The danger of emphasizing procedural reforms (such as transparency measures) is of course that of legitimizing measures which are contrary in spirit or letter to the substantive norms of a liberal trading order. The substance/procedure issue is particularly acute with respect to VERs. Explicitly subjecting VERs to domestic and international transparency requirements, or other procedural constraints such as time limitations, would be to render legitimate a form of protection which legal experts generally agree is in violation of existing GATT provisions on quantitative restrictions and on non-discrimination. The dilemma is well-expressed by Bhagwati: would a GATT agreement on procedural constraints "simply confer legitimacy on VERs, without any real benefit in terms of surveillance, or would it help regulate, moderate and refine their use?" (Bhagwati, 1987).

A related issue is that of broadening the safeguards provisions of the GATT so that they would explicitly include selective quantitative restrictions but mandate compensation and other limits on their use (Richardson, 1988). Richardson suggests that even developing countries would be prepared to accept some sacrifice of substantive norms such as non-discrimination, for the adoption of realistic if decidedly second best techniques of constraining the negative welfare effects of the New Protectionism.

Beginning from changes in the domestic policy making process does not preclude eventual movement towards more substantive international changes. It is merely to acknowledge that international consensuses must be built from domestic policy consensuses, and that values of liberal internationalism cannot be sustained absent domestic support. To believe otherwise, as Tumlir suggests, is to subscribe to an elitist assumption that "a group of eminent statesmen, or scientists and philosophers can be brought together to devise rules, draw up blueprints or generally beneficial solutions to particular problems" (Tumlir, 1985; p. 401). Our judgment is that there are significant windows of opportunity for such political and intellectual leaders to influence outcomes, but that these are first and foremost to be found in the marketplace of ideas and values which exists in the domestic policy process. It is there that the margins for more rational choice may be found and it is there, first of all, that they must be expanded.

APPENDIX:

A MACROECONOMIC AND INDUSTRY OVERVIEW

Peter A. Simm

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APPENDIX: A MACROECONOMIC AND INDUSTRY OVERVIEW

(I) INTRODUCTION

(i) GENERAL

This appendix presents a selective survey of the economic performance of eight OECD countries for the periods 1956-66, 1966-76, and 1976-86. The countries examined are Australia, Canada, France, Japan, Sweden, the U.K., the U.S., and West Germany. Section (I) defines terms, points out various general *caveats*, and discusses methodology. Section (II) gives a thumbnail sketch of the macroeconomic performance of the eight national economies. A brief overview of the manufacturing sector of each country is presented in Section (III), while Section (IV) contains surveys of particular industries. Attention is focussed on seven industries: coal mining, iron & steel, shipbuilding, passenger automobiles, textiles, clothing, and footwear. Changes in production, employment, and labour productivity, are described for each industry. Section (IV) compares these intertemporally and internationally. Industry-specific *caveats* are discussed as well. Section (V) summarizes certain trends and highlights extremes.

Sections (II) through (V) are primarily descriptive rather than analytical. No attempt is made to account systematically for specific developments or trends. The reason for this descriptive approach is simple: an analysis of the causes of changes in seven industries in eight countries over thirty years would be a monumental undertaking (unless it were so superficial as to be useless). A familiarity with the peculiar complexities of an industry would seem to be a prerequisite to explaining its performance. Indeed, a recent study of Canadian manufacturing industries confirmed that

> ...there are important factors affecting the performance of individual industries which are not accounted for by the standard "economic" measured inputs--capital, labour, materials and energy. [Hazeldine *et al.*, (1985), p. 72].

(For a list of data categories relevant to analysis of an industry, see Porter (1980), p. 370.) This appendix thus is content to describe industry performance in fairly broad terms, and does not attempt to explain the reasons for particular developments or trends.

(ii) PRODUCTION

(a) Some Problems With Measuring Output in Terms of Value

In recent years, the roller-coaster ride of the U.S. dollar's exchange rate relative to the Japanese yen and other major currencies has garnered widespread publicity. The use of highly volatile exchange rates to convert currency-denominated data from different countries into a numéraire is akin to using high-speed photography to freeze the image of rubber balls ricocheting around a small room: timing is everything. Although averaging techniques could be used to dampen the volatility, some of the specifications involved would be highly arbitrary, and might lead to significant distortions [see Mayer (1983), pp. 90-91]. Similarly, it seems indefensible to convert using the exchange rates of some arbitrarily designated "benchmark" year, such as 1980.

A related conceptual problem is the proper sequence for currency translation. For example, should 1956 French data expressed in francs be: (i) converted into U.S. dollars at the 1956 exchange rate, with those 1956 dollars then being inflated into 1988 dollars; or, (ii) inflated into 1988 francs, with those 1988 francs then being converted into U.S. dollars at the 1988 exchange rate? There is no obvious justification for preferring one method to the other, although the choice may significantly affect not only the absolute magnitude of a converted value, but also its size relative to the other converted values. Aside from these important problems, using exchange rates entails some less obvious dangers.

The use of exchange rates to translate currency-denominated data for different countries into U.S. dollars gives the converted data an *illusion* of comparability. Yet intertemporal comparability with respect to a particular country is by no means assured. For example, from 1969 to 1973, the Volkswagen Beetle's production value increased by over 30% as measured in U.S. dollars, yet the car itself was virtually unchanged over this period [Mayer (1983), p. 81]. As well, international comparability is not achieved because price levels--both overall and for specific commodities and groups of items--inevitably vary from country to country. The relative purchasing power of a currency in its own country is not faithfully reflected by its dollar exchange rate because exchange rates are determined by a variety of other factors as well, such as investment flows.

A greater degree of comparability among translated data is achieved if purchasing power parities (PPPs) are used instead of exchange rates. A PPP expresses the rate at which one currency should be converted into another in order to make it possible to purchase an equivalent set of goods and services in both countries. (Note, however, that some goods and services are not traded; and that the prices of some goods and services in a country are subsidized.) A PPP can differ quite substantially from its exchange-rate counterpart: for example, in 1980, the U.S.-West German exchange rate was $1.00=DM1.82, whereas the PPP (for GDP) was $1.00=DM2.37, or about 30% more Deutschmarks per dollar [Ward (1985), p. 13]. As Ward has noted, "the use of exchange rates as proxies for PPPs has become quite unacceptable in recent years as a result of major fluctuations in exchange rates which have made them erratic currency convertors for statistical purposes" [*ibid.*, p. 3].

Unfortunately, calculating PPPs is a complex, multi-stage process that is laden with assumptions [see *ibid.*, p. 37]. Authoritative PPP estimates involving all eight of the countries of interest seem to be scarce; as well, there is a dearth of pre-1970 PPP estimates, and Australian figures of any vintage are exceedingly rare. PPPs change over time (albeit less erratically than exchange rates) [*ibid.*, p. 12]; yet it appears that, at best, PPPs are being calculated only at five-year intervals [see *ibid.*, p. 3] (with the OECD's estimates of 1980 PPPs being published in 1985). Also, the results of PPP calculations depend on the particular group of countries for which PPPs are being estimated [*ibid.*, p. 36]. As well, even if an omniscient entity handed down a complete and up-to-date set of PPPs, the conundrum of the proper conversion sequence (outlined above) would remain.

Yet another problem is that the relevant PPP figures for translating data on a particular industry pertain to that industry's production rather than to the economy as a whole. Published estimates of industry PPPs seem to be extraordinarily rare, however. As of 1985, the most up-to-date PPPs for automobile industry production were for the year 1970, and that set of estimates has been strongly criticized on a number of grounds [see Mayer (1983), pp. 88, 90].

Because of all of these problems associated with international comparisons of currency-denominated data--especially data that span several years--the use of currency-denominated data has been avoided here. Production has instead been measured in physical quantities wherever feasible. However, as noted below, physical quantity is not an impeccable basis for measuring the production of certain industries.

(b) Some Problems With Measuring Output in Terms of Physical Quantity

For commodities like coal and crude steel, it is appropriate to measure production in terms of physical quantity, such as tonnage. But for products like automobiles and footwear, the heterogeneity of output makes physical units of production less meaningful. This problem is discussed at greater length in the relevant sections below dealing with specific industries. Heterogeneity is overcome in currency-denominated measures of output through the use of prices.

Another problem with physical quantity is that it is a gross measure of output. In contrast, a value-added measurement is net of the intermediate materials, components and services that the industry in question has purchased from other industries. As Hazeldine notes:

> [The concept of labour productivity] becomes problematic at the disaggregated industry level, where much of the labour input is embodied in the intermediate goods and services purchased from other industries. At this level, measured labour "productivity" can change if firms alter the proportion of work that they buy in from other firms rather than undertake themselves, even if there is no change in output or input in the system at large. This problem is avoided if value added, or "net" output, which excludes intermediate inputs, is used as the numerator of the productivity measure, but then other conceptual and measurement problems arise [Hazeldine *et al.*, (1985), p. 6].

Data on value-added is not, however, as readily available as data on the physical quantity of output. But even such value-added data as are available are subject to a formidable problem in international comparisons: the translation difficulties described above apply since the data are currency-denominated.

The problems associated with currency-denominated output measures were felt to outweigh those of physical quantity measurements. The latter were thus used in this appendix wherever possible.

(iii) EMPLOYMENT

There are two basic *caveats* here. First, employment series are not always comparable over time (meaning that some *ad hoc* splicing has been necessary), or from country to country, or even from industry to industry in certain countries. This problem bedevils even the best-equipped researchers [see, for example, OECD (1986), p. 70]. Second, due to data availability, labour inputs have been measured here in terms of persons employed. This regrettably masks certain important trends. The average number of hours worked per week has declined significantly in most industries in most of the eight countries over the period 1956-1986. Also, the increasing importance of part-time work--although concentrated in the service sector rather than in manufacturing--suggests that the number of persons employed may be effectively overstated. These two trends both imply the same thing: unless labour inputs are measured in terms of hours worked, labour productivity growth is understated because labour inputs are increasingly overstated.

(iv) LABOUR PRODUCTIVITY

(a) General

Because labour productivity is calculated by taking the ratio of output to labour input, the various problems outlined above for measurements of production and labour inputs are germane to measurements of labour productivity as well. The term *labour productivity* is somewhat misleading. Numbers calculated by taking the ratio of output to labour input are not simple reflections of the skillfulness and diligence of workers. Labour productivity growth depends on a variety of other factors as well. At a concrete level, these include higher capital investment per worker, increased capacity utilization, new technology and production techniques, management improvements (in orientations and attitudes, technological competence, and labour relations), better workforce quality (higher levels of general education and work experience, and improved attitudes), and better product quality (reduced defects) [see *ibid.*, pp. 9-10].

(b) Total Factor Productivity and Factor Intensities

Changes in labour productivity have two general components: changes in total factor productivity (TFP), and changes in factor intensities (i.e. use of capital and material inputs relative to labour inputs). Growth in TFP is in some sense growth in "overall" productivity, since it indicates the growth in the output that can be produced with a fixed bundle of capital, labour and materials--i.e. the greater efficiency with which existing resources are used. Increases in labour productivity arising from substitution of capital or materials for labour are not necessarily accompanied by improvements in TFP [see *ibid.*, p. 97; and Denny & Fuss (1981), pp. 7-8]. Indeed, for manufacturing in the Canadian prairie provinces, the average annual growth rate in TFP during 1971-77 was less than half that of the preceding decade, while labour productivity grew at a considerably faster pace, due to more rapid substitution of capital and materials for labour [Denny & Fuss (1981), p. 11].

Reasons for changes in factor intensities might include new technologies (changing the relative marginal products of the factors), shifts in relative prices of the factors, and changes in the degree of processing [*ibid.*, p. 7]. The contribution of factor substitution to growth in labour productivity can be extremely important. For example, in each region of Canada during 1961-1977, about 60-75% of manufacturing's growth in labour productivity was attributable to growth in the intensity of non-labour factors of production (primarily capital) [*ibid.*, pp. 10-11]. As well, Canada's regional differentials in labour productivity are predominantly due to large differences in factor intensity levels [*ibid.*, p. 20].

Lack of data, and the complexity of TFP calculations [see, for example, Berndt & Fuss (1986), pp. 3ff; U.N. Economic Commission for Europe (1986), pp. 89-91], have precluded the disaggregation in this appendix of labour productivity growth into total factor productivity growth and changes in factor intensity.

(c) Capacity Underutilization and Other Forms of Temporary Equilibria

Traditional measurements of productivity growth are biased by failure to adjust for the fact that producers often are in temporary equilibria that deviate from long-run equilibrium. A temporary equilibrium may occur when, as in 1973, a factor-price shock induces short-run relative factor usage that is inappropriate in the long-run; or, as is fairly common, when an unexpected demand shock leads to capacity underutilization. Measurements of productivity growth can be substantially biased if no adjustment is made for the effects of temporary equilibria. Berndt and Fuss considered how, according to traditional measurements, TFP growth for U.S. manufacturing was acutely slower in the eight years after 1973 than in the eight years prior to 1973. They found that, on a value-added basis, between 18% and 45% of this apparent slowing was attributable to variations in capacity utilization rates [Berndt & Fuss (1981), p. 27]. The OECD has also published estimates showing that varying capacity utilization sometimes substantially distorts traditional labour-productivity calculations. For example, the Canadian manufacturing industry's labour productivity grew at an average annual rate of 1.7% for 1973-1980, unadjusted for capacity utilization; but when adjusted for capacity utilization, the corresponding figure for 1972-1979 is 2.8% [OECD (1986), pp. 94-95]. Again, for Canadian manufacturing during 1979-1983, TFP had an average annual *decline* of 1.2%, if no adjustment is made for capacity utilization; but if such an adjustment is made, the corresponding figure is *growth* of 0.4% per annum [U.N. Economic Commission for Europe (1986), p. 92]. Capacity utilization adjustments are also very relevant at the industry level, as is suggested by the variability in the annual average capacity utilization rates for Canada's Primary Textiles industry--1981: 86.9%; 1982: 66.1%; 1983: 88.1% [Canada, Statistics Canada (1987), p. 49]. The capacity utilization rate for Total Manufacturing tends to change less abruptly, yet can still vary greatly--1973: 90.3%; 1982: 65.8% [*ibid.*, p. 52].

Because capacity utilization statistics are not readily available at the industry level for many of the countries and years of interest, no adjustments have been made to the productivity figures presented here. Even were such statistics available, the adjustment calculations would be complex and a matter of some controversy [see Berndt & Fuss (1981)].

(v) RATES OF CHANGE

The statistical tables here report average annual rates of change in various specified indicators, such as employment in an industry. The average annual rate of change in such an indicator is calculated as the geometric mean. It represents the annual rate of change which, if compounded over the period specified, would account for the difference between the starting and ending values of the underlying indicator.

When an average annual rate of change is shown for an aggregate entity, this is calculated on a weighted basis rather than as the simple mean of the component rates of change. For example, Table E1 (below, on p. 54) indicates that during the period 1956-66, the average annual change in production of crude steel was 3.72% for "the eight nations as a whole". This amount was calculated by summing the 1956 crude steel production of Australia, Canada, France, Japan, Sweden, the U.K., the U.S., and West Germany, and comparing that total with the corresponding total for 1966. If one instead took the simple mean of the component growth rates, the answer would be 5.92%. That method is incorrect because it fails to weight the component growth rates appropriately: the growth experienced in a country which started the period with relatively minuscule output is naively given the same weight as the growth in a country which was already a major producer.

One problem with presenting the average annual rate of change associated with a lengthy period is that this number may mask substantial fluctuations within the period. For example, during the period 1966-76, American automobile production had two pronounced peaks and three sharp valleys; while the corresponding average annual rate of decline was a deceptively placid 0.12%. This illustrates why an average annual rate of change should not be interpreted as necessarily implying smooth changes. It also suggests that in certain cases, the choice of the period's starting and ending points may dramatically affect calculations of average annual rates of change. An effort has been made to note in the text where the underlying data are extremely variable.

It is worth keeping in mind that over long periods of time, even seemingly small differences in average annual growth rates can result in huge disparities in ending quantities. Table A1 illustrates this effect. Also note that negative and positive rates of change are not perfectly symmetrical, as Table A2 shows.

TABLE A1

THE RESULTS OF 100 YEARS OF GROWTH

Starting Quantity	Ending Quantity	Average Annual Growth Rate (%)
1	2	0.70
1	5	1.62
1	10	2.33
1	25	3.27
1	50	3.99
1	100	4.71
1	250	5.68
1	500	6.41
1	1000	7.15

TABLE A2

THE ASYMMETRY OF RATES OF CHANGE

Total Change Over 10-Year Period	Average Annual Rate of Change
+50%	+4.14%
-50%	-6.70%
+75%	+5.76%
-75%	-12.94%

(vi) MEASURING STRUCTURAL ADJUSTMENT

(a) Types of Structural Adjustment

Firms in an industry facing trade-related adjustment pressures have a variety of adjustment options. The simplest option is exit from the industry. This allows the exiting firm to redeploy in other, more promising industries whatever assets it can salvage. Two things can happen to the exiting firm's industry-specific capacity. First, it can be scrapped, either by the exiting firm itself or by a firm that purchases the capacity. If this happens, then industry adjustment is advanced through an increase in capacity utilization ratios (and profitability) resulting from lower industry capacity. Industry employment will fall as well. Since presumably the least efficient firm will exit earliest, the average productivity of the remaining firms will rise. Second, if another firm buys and uses the exiting firm's capacity, then the purchasing firm may realize economies of scale, or, depending on how broadly the industry has been defined, benefits from vertical integration. The industry's capacity remains unchanged in this second scenario. Of course, industry-specific facilities may sometimes be converted for use in a related industry, such as by modifying shipyards to build offshore oil rigs [see, for example, OECD, DSTI (1987a), p. 10].

A limited form of exit is to reduce or cease some stages of production by subcontracting work out domestically or offshore. The production stages most likely to be externalized by a firm in any of the eight countries are those with a relatively high labour content. Offshore processing should thus reduce industry employment while raising labour productivity. The productivity gains here are somewhat illusory, in that they merely arise from the cessation of an inefficient activity rather than from an actual improvement in the productivity of the remaining workers.

The reverse of exit is to take-over or merge with other firms in the same industry. (The new, larger entity may perhaps enjoy various benefits, such as synergies arising from a combination of complementary resources, improved financial capacity to undertake modernization, and the realization of unexploited multi-plant economies of scale.) Rationalization or even outright retirement of capacity often would follow such a merger or take-over. Capacity rationalization is also a fairly common undertaking while pruning product lines. Rationalizing capacity concentrates the firm's resources into higher-valued uses within the industry. Industry capacity and employment will drop somewhat, but productivity should rise.

The above-mentioned pruning of product lines is the most common manifestation of product-line rationalization. This is driven by market segmentation and a recognition of where the firm's competitive advantage lies. Product differentiation may also be an objective if the product is not a commodity. Note that fitting the firm within a market niche where it will enjoy a competitive advantage does not necessarily entail a reduction in capacity; indeed, it may sometimes require the acquisition of additional capacity. Thus product-line rationalization has indeterminate effects on capacity and employment, and should have no direct impact on productivity.

Diversification presents another alternative. The firm remains in the industry, but buys interests outside the industry--effectively becoming a conglomerate. This may be intended as a way to stabilize the firm's cash flows so as to finance activities within the industry, or it may be intended as a form of staged exit. If the former is the case, industry productivity should rise; while in the latter case, capacity may be allowed to run down, so industry productivity would fall. The effect on employment levels is indeterminate in both cases.

A much more appealing option is to improve total factor productivity. (Recall from Section (I)(iv) above that total factor productivity and labour productivity do not necessarily move in tandem.) One possible way to do this is to expand capacity and/or lengthen production runs so as to capture unexploited economies of scale. Another alternative is frequently termed "modernization"--the adoption of new production technologies. The upgrading or replacement of machinery (with appropriate retraining of employees) exemplifies modernization, although modernization does not always imply a higher ratio of capital to labour. Typically, however, the new technology requires fewer workers to operate it, so employment falls.

Modernization sometimes directly entails an increase in capacity, as has been the case in the steel industry [see OECD, DSTI (1987b), p. 20].

Also, if modernization improves product quality, this may (perversely) cause sales to decline: greater product durability (e.g. better corrosion resistance in steel) might ultimately harm sales; and the quantity of the product needed in certain applications may be reduced [see *ibid.*].

Modernization can be very expensive, and if undertaken at an inopportune time, may result in the bankruptcy of the firm, even though the firm has relatively high productivity. This should merely result in a change of ownership, rather than an actual loss of capacity, assuming that the plant can be operated to generate an adequate return.

Besides the labour-shedding that usually accompanies capacity rationalization and modernization, the firm may cut its total labour bill by negotiating substantial wage roll-backs with workers. This has been done, for example, by several bankrupt steel mills in the United States. While this may amount to a significant competitive adjustment, it will not be directly visible in productivity statistics.

The above is by no means an exhaustive list of possible modes of adjustment. Yet is serves to show that exit is only one of many possible strategic responses to foreign competition. Also, some hint is given of the complexity of actual adjustment in an industry. This complexity is such that industry statistics may well give little or no indication of the particular mixture of adjustments taking place.

It is crucial to note that whatever adjustments take place likely are not attributable solely to trade-related pressures. Some actions would be taken even in the absence of foreign competition. Domestic competitive pressures, as well as the obvious desire to enhance profitability, may well be sufficient to induce some productivity improvements. Similarly, a firm may exit in response to domestic competition.

Further, it is extremely difficult to determine the impact of government policies on trade-related adjustment because their true impact is not the totality of adjustment, but rather only that adjustment that would not have taken place in the absence of those policies.

(b) Reductions in Industry Capacity

A firm in an industry facing trade-related adjustment pressures may adjust, *inter alia,* by reducing its capacity while remaining in the industry, or by exiting the industry without selling its capacity to firms that will actually operate that capacity. Either action will reduce industry capacity.[1] However, good long-term, international data indicating changes in industry capacity are not readily available. Concentration ratios might be used as substitute for such data. However, concentration ratios in an industry often are much higher than needed to fully achieve multi-plant economies of scale [see Scherer (1980), p. 118]; so an increase in concentration is not necessarily motivated by scale economies. Also, "the strongest and most consistent explanation" of changes in concentration ratios is regression toward the mean [*ibid.,* p. 116]. Further, due to non-comparable industrial classifications, substantial amounts of contaminating activity where industries are comparable, and various data idiosyncrasies, "formidable problems are encountered in making...international comparisons" relating to concentration ratios [Scherer (1980), pp. 70-71]. The latter difficulties alone are sufficient to preclude the use of concentration ratios here.

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[1] Note that reducing capacity is not synonymous with the actual dismantling of physical plant. Capacity is also reduced when physical plant is converted for redeployment in other industries. Further, capacity is effectively reduced when workers with important industry-specific skills leave the industry (by obtaining permanent positions in other industries, or by retiring). See OECD, DSTI (1987a), p. 10.

Another possible proxy is the average annual rate of change in the number of establishments, which can be calculated from official statistics. Yet the results of such a calculation must be treated with extreme caution. First, the calculation is based on two "snapshots" of the number of establishments. The difference between these two statistical pictures is the net outcome of a dynamic process of entries and exits that occurred between the taking of the pictures. Thus comparing the number of establishments at the start and end of a period merely allows one to infer the extent to which entries exceeded exits (or vice versa), but does not reveal the actual extent of entries or exits in the industry.

A second--and very important--problem with statistics pertaining to the number of establishments is that the size of establishments is far from uniform. This means that changes in the number of establishments are not reliable indicators of changes in the industry's capacity. For example, if a few large establishments enter the industry, the industry's capacity may rise even if a high number of small establishments exit during that period.

A third difficulty with statistics on the number of establishments is that there are numerous discontinuities in the various national time series. These typically arise from changes in the definition of "establishment". A glance at Table A3 shows how such discontinuities wreak havoc with any attempt to measure changes over standardized periods.

The French merchant shipbuilding & repair industry provides an example of how significant changes in industry structure may be masked by the number of establishments. The total number of enterprises in the

French industry was 16.3% less in 1976 than in 1972. But a much more complex picture emerges if one has separate statistics on shipbuilding and on repair. The number of shipbuilding enterprises dropped a total of 42.2% between 1972 and 1976 (with most of this decline occurring over 1975-76), while the number of ship-repair enterprises grew by a total of 64.8%. Table A4 shows that in 1972, there were roughly three shipbuilding enterprises to every one ship-repair enterprise; but by 1976, the numbers were virtually equal. Yet changes in the relative numbers of employees were not nearly so dramatic. Of the industry's employees in 1972, 88% were engaged in shipbuilding, compared with 82% in 1976. This suggests that France's ship-repair enterprises generally have far fewer employees than shipbuilding enterprises. It also suggests that statistics relating to the total number of shipbuilding & repair enterprises are not very meaningful, even if separate data are available on shipbuilding and on repair.

In light of all the above problems, statistics on changes in the number of establishments are not included in this appendix. This unfortunately means that hard numbers on exit are missing here. It seems that even the best-equipped researchers have to struggle with similar informational deficiencies. For example, a recent OECD study on structural adjustment in the textiles industry was forced to concede that "little data is available about...[the exit] option" [OECD, DSTI (1987c), p. 36]. This was no exaggeration: outright exit was mentioned as being "rare" [*ibid.*, p. 5], but out of the nearly one hundred statistical tables in an annex to the OECD report, not a single one contained data on this matter.

TABLE A3

MERCHANT SHIPBUILDING & REPAIR--AVERAGE ANNUAL % CHANGE IN NUMBER OF ESTABLISHMENTS

	1958-66	1966-76	1976-84
Australia	4.77	-3.73[a]	-2.46
Canada	1.55	-1.26	4.56[b]
France[c]	-1.76[d]	0.00	-12.38
Japan	0.32	0.87	-1.79
Sweden	-0.32[e]	-0.67[f]	-4.90
U.K.	-0.34[g]	4.70[h]	-3.60[j]
U.S.	-0.10[e]	2.57[k]	-1.70[m]
W. Germany	-1.63	-1.00	-2.18

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[a] 1969-1976. [b] 1976-1982.

[c] French shipyards which build or repair at least some fishing vessels.

[d] 1957-1966. [e] 1958-1963. [f] 1964-1976.

[g] 1958-1968. [h] 1970-1976. [j] 1976-1983.

[k] 1963-1977. [m] 1977-1982.

TABLE A4

THE SHIFT IN FRANCE FROM SHIPBUILDING TO SHIP-REPAIRING

	1972	1973	1974	1975	1976
Number of shipbuilding enterprises (as % of total)	74.8	71.4	69.3	63.1	51.7
Number of ship-repair enterprises (as % of total)	25.3	28.6	30.7	36.9	48.3
	100.0	100.0	100.0	100.0	100.0
Number of shipbuilding employees (as % of total)	88.2	87.8	89.5	84.2	82.0
Number of ship-repair employees (as % of total)	11.8	12.2	10.5	15.8	18.0
	100.0	100.0	100.0	100.0	100.0

Note: The data in this table refer to French shipyards which build or repair at least some fishing vessels.

(vii) RECOGNIZING AN INDUSTRY'S DECLINE

An industry in a particular country is "declining" if the number of units of output sold has been decreasing over time. The period of this decrease must have been sufficiently long to rule out the possibility of a mere cyclical downturn in the industry. However, sales need not have been monotonically decreasing: there may well be an occasional respite in a clear downward trend. (To facilitate the gathering of statistical data, production has been used throughout this appendix as a proxy for sales.) Where an industry is in decline and its employment levels have also had a consistently downward trend, that industry may be said to be "contracting".

The fact that an industry is relatively unprofitable does not necessarily indicate that the industry is in decline; nor is an industry's relative lucrativeness solid assurance that the industry is not in decline. Vigorous competition among firms, low entry barriers, strong bargaining power of the firms' suppliers and customers, the overbuilding of new capacity, and government regulation are among the possible explanations for an industry's relative unprofitability. Conversely, a declining industry may nevertheless be profitable (on a risk-adjusted basis) relative to other industries if the situation is sufficiently favorable. Many factors (if present) would tend to enhance the situation's propitiousness--factors such as low exit barriers encouraging the least competitive firms to exit quickly; the successful implementation of a "harvesting" strategy by the larger firms; price-insensitivity among the customers in the most important market segments; falling costs of key raw materials; improvements in total factor productivity; a lack of vigorous competition among the remaining firms; a lack of products which are close substitutes; and/or high costs that would be incurred by major buyers if they switched to substitute products. [See Porter (1980), c. 1, 12.]

Drops in industry employment levels also are not reliable indicators of decline. Labour productivity may increase to such an extent that output rises even as employment falls. The experience of agriculture over the past several decades is a classic example of this: food production has reached record levels, although the number of agricultural workers has dropped sharply. As discussed under the heading "Establishments", decreases in the number of establishments are another unreliable indicator of decline in an industry.

For some analytical purposes, it is useful to distinguish between endemic and pandemic decline in an industry. The former is specific to certain countries in a globally healthy industry; while the latter is characterized by non-cyclical declines in world output, with perhaps a few nations bucking the trend. Coal-mining is an example of an industry in endemic decline. As Table D1 (*infra,* p. 42) shows, coal-mining is a declining industry in Sweden, France, West Germany and the U.K., but global production has been increasing. In contrast, the decline in merchant shipbuilding after 1975 has been pandemic. World production of merchant ships declined at an 8.0% average annual rate during 1976-86, and ship output dropped significantly in each of the eight nations (see Table F1, *infra,* p. 58). Meanwhile, shipbuilding activity increased in only a few countries, notably South Korea.

Although recent data on world steel output are not available, it is known that OECD production of steel has been declining since 1974

[OECD, DSTI (1987b), p. 5]. Because the OECD accounts for the bulk of the world's steel output, this suggests that the post-1973 steel industry is in pandemic decline.

Endemic decline generally arises from a deterioration in the international competitiveness of the industry in a particular country or countries. However, in the case of pandemic decline, the domestic industry would be in decline even in the absence of foreign competition. An increase in the competitiveness of some off-shore firms can, of course, exacerbate the decline of the domestic industry in a pandemic situation.

(viii) THE NATION AS AN ECONOMIC ENTITY

When economic statistics are reported on a national basis, as is done here, it is implicitly assumed that nations are the appropriate entities among which to measure and compare economic performance. National aggregates are so commonplace that few people consciously question their meaningfulness. (Indeed, as was pointed out in Chapter II, the phraseology commonly used in discussing international trade implies that countries are trading with each other, although in reality the traders are almost always private economic agents.) The validity of this mindset is questionable. Some observers have grave doubts about treating nations as "the basic, salient entities of economic life" [Jacobs (1984), p. 31]. They concede the political, military, and perhaps cultural significance of the national entity, but point to the existence of highly distinct regional and local economies within most countries.

Canada is a prime example of this. Each western province (except Manitoba) has a boom-or-bust resource-based economy, with extreme dependence on highly variable commodity prices: wheat in Saskatchewan, oil in Alberta, and forest products in B.C. In contrast, the economic performance of each Atlantic province is much more stable--or perhaps stagnant. Unemployment there is perpetually high (the spread between Newfoundland's average rate in 1986 of 20.0%, and Ontario's 7.0% rate, is not an historic aberration), growth is slow, and incomes are low. Ontario and Quebec both have fairly well-diversified economies, and Ontario in particular has traditionally enjoyed prosperity relative to the rest of Canada. But again, a strong argument can be made that the Province of Ontario itself is not a coherent economic entity. The economy of northern Ontario is dependent on mining and forestry, meaning that it can be deeply depressed even while the diversified south booms. Indeed, one could usefully distinguish between the so-called Golden Horseshoe and the rest of southern Ontario.

Productivity statistics also highlight the existence of important dissimilarities between Canada's regional economies. For example, over the period 1961-77, the Atlantic region's average level of labour productivity in manufacturing was only 81.5% of that in Ontario; and Quebec manufacturing had a similarly poor showing [Denny & Fuss (1981), p. 21]. Over the course of that period, these regional productivity gaps narrowed only slightly [*ibid.,* p. 26]. Differentials in factor intensity rather than disparities in total factor productivity are the main reason for the sharp regional differences in labour productivity in manufacturing [*ibid.*]

Since labour productivity in manufacturing is equivalent to the weighted average of labour productivity in the various manufacturing industries, it is not surprising that, at the industry level, regional differences are often far sharper. For example, relative to that in Ontario, the average level of labour productivity over 1961-75 in Quebec's Transportation Equipment industry was 45 (Ontario=100), and in Quebec's Knitting Mills was 117 [*ibid.*, p. 23]. Such disparities typically were quite stable during the period [see *ibid.*, pp. 23-25].

Canada's various regions have had such profound and long-standing differences in economic performance that the principle of equalization payments is now even constitutionally entrenched [*Constitution Act, 1982*, s. 36(2)]. Given the regional disparities in Canada, is it really meaningful to treat Canada as an economic entity in its own right? The case for doing so seems to hinge on the existence of federal economic policies which have distinctly national (as opposed to merely regional) effects that are not neutralized by provincial policies. Historically, Canada's high tariff walls forced substantial east-west trade flows within our borders, often suppressing natural north-south, cross-border trading patterns. Yet Canadian trade barriers have, in general, diminished considerably during the past few decades. Even so, significant tariffs remain on some products, and non-tariff barriers have grown markedly in importance. As well, the pernicious growth of interprovincial trade barriers has tended to hinder economic integration among the provinces.

One might point to the existence of a common currency as a reason for agglomerating the regional economies. This argument is weakened to whatever extent Canadian monetary policy is not independent of that of the United States. Similarly, the significance of our federal tax system is diminished to whatever extent it cannot in practice sharply diverge from the American system.

Overall, it appears reasonable to have some skepticism about implicit characterizations of Canada *qua* Canada as a meaningful economic entity. The same skepticism should apply to the national statistics of most other countries as well. Also, one should be aware that national statistics may mask important intra-national, inter-regional adjustments in an industry. For example, during the 1960s, textiles production in the U.S. shifted from the North-East states to the less-unionized South.

(ix) INDUSTRY HETEROGENEITY

A similar skepticism should be applied to statistics purporting to describe a particular "industry". As noted above, the attributes of an industry may vary greatly from region to region within a country. Apart from these regional differences, another factor should be kept in mind: an "industry" is often an aggregate of sub-industries. Important characteristics, such as the absolute level of labour productivity, may differ significantly among these sub-industries. The footwear industry is a case in point: "There is no doubt that the type of footwear produced greatly affects productivity" [Canada, Anti-Dumping Tribunal (1977), p. 2.17]. Labour productivity in an industry is the weighted sum of the labour productivity of each of its sub-industries. So, if a country's mix of footwear production contains a high proportion of footwear types that have a relatively low labour content, such as womens' footwear, then the footwear industry in that country will have a relatively high level of labour productivity. Similarly, if the output of a labour-intensive sub-industry grows to account for a larger share of industry production, labour productivity will decline, *ceteris paribus.*

Sub-industries often are not distinguished due to the arbitrariness of "industry" boundaries:

> Any definition of an industry is essentially a choice of where to draw the line between established competitors and substitute products, between existing firms and potential entrants, and between existing firms and suppliers and buyers. Drawing these lines is inherently a matter of degree... [Porter (1980), p. 32].

Scherer explains why the industry definitions used in official statistics may not be economically meaningful:

> [Official statisticians] must use [industry] definitions facilitating accurate reporting by business firms, which usually means that they must follow the way firms have grouped or segregated their production operations. Emphasis is often on similarity of production processes, which may not reflect competitive interrelationships. Consequently, four-digit census industries and even five-digit product classes are sometimes too broad relative to the economist's ideal industry definition, and sometimes they are too narrow. The ideal definition of a market must take into account substitution possibilities in both consumption and production. [Scherer (1980), p. 60].

Of the seven "industries" examined in this appendix, some are almost certainly too broadly defined. Merchant shipbuilding is an obvious example. Few shipyards in the world are capable of building supertankers; and a trawler is not good substitute for a luxury cruise ship or a large, ocean-going freighter. Another clear example of an "industry" defined overinclusively is the "textiles industry", which at the very least could be usefully subdivided into synthetic textiles and natural-fibre textiles, production of the former being much more capital-intensive and much more sensitive to oil prices. Similarly, the "clothing industry" is readily divisible into mens' and womens' clothing, with several other useful subdivisions being possible.

(II) MACROECONOMIC OVERVIEW

(i) INTRODUCTION

This section presents a thumbnail sketch of the performance of the eight national economies for the periods 1956-66, 1966-76, and 1976-86. It is a sort of report card, focusing on long-term results rather than trying to explain how they were achieved. Thus aggregate supply shocks and aggregate demand shocks are not explicitly considered here. Random shocks should roughly balance out in the long run. Also, because a capitalist economy is constantly subject to random shocks, it seems legitimate to evaluate long-term economic performance without trying to adjust for such shocks. Resiliency and the ability to adjust are important economic characteristics, and can be inferred from long-term performance unadjusted for shocks.

Two macroeconomic variables which are usually matters of great concern--inflation rates and unemployment rates--arguably do not warrant such attention when examining an economy's long-term performance. Inflation must be factored out of money-denominated measurements in order to observe real changes, but is not of great intrinsic interest. This is not to deny that monetary phenomena can have substantial effects on real economic activity. However, such effects are reflected in statistics relating to the real economy.

Unemployment rates reflect not only the economy's record of job creation, but various other factors as well. Increases in population and in labour-force participation rates can make unemployment rates far higher than they would otherwise be. Also, it is difficult to compare unemployment rates internationally because methods of calculation vary substantially from country to country. Further, intertemporal comparisons for a single country can be problematic where methodological changes have caused profound discontinuities in the time series.

Three variables clearly are meaningful gauges of economic performance over a lengthy period: changes in real GDP, in real GDP per capita, and in employment levels. The first measures growth in the economy's production, the second roughly approximates changes in the economic well-being of the average citizen, and the third is a measure of the economy's performance in net creation of jobs.

(ii) *CAVEATS*

(a) Some Problems With GDP

The measurement of Gross Domestic Product (GDP) is not an exercise in absolute precision. This is made explicit by the existence and significant size of the "residual error" or "statistical discrepancy" lines in national accounts. Estimates of GDP are fallible in another sense too. Official figures do not attempt to measure some important spheres of economic activity. The so-called "underground economy"--consisting of otherwise-legal transactions that are unreported to avoid taxation--is thought to be of substantial size in each of the eight countries, yet is not included in GDP statistics. The same can be said of illegal activities such as drug trafficking. (Yet it is debatable whether the production and distribution of substances contrary to public policy *should* be included in the year's tally of a nation's production of goods and services.[1] Both these types of economic activity have increased considerably during the past three decades, suggesting that real GDP growth is greater than official figures indicate.

The resulting understatement of GDP growth may be mitigated by the possible slowing in growth of another area of economic activity not included in GDP calculations: nonmarketed economic activities. Factors such as the strong growth in the labour-force participation rate of adult females, the decline in the birthrate, the proliferation of day-care centres, the popularity of maid services, and increased spending on restaurant meals, suggest that the quantity of unpaid housework may be declining. Also, despite the plethora of do-it-yourself books, repairwork done by the consumer may be decreasing in response to affluence and greater product complexity. Even if nonmarketed economic activities are not actually declining, it seems likely that they are growing less quickly than economic activity in general. This means that including nonmarketed economic activities in official GDP estimates would somewhat reduce calculated growth rates.

Finally, GDP estimates are also notoriously prone to substantial revision. Published figures for the most recent periods are effectively only provisional estimates. The United States, for example, tends to initially underestimate its exports.

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[1] Note that not all criminal activity is within the theoretical ambit of GDP. For example, theft is a form of (involuntary) economic transaction, but the value of goods stolen would not be counted in GDP because this represents wealth transfers rather than wealth creation. Again, violence is not an economic transaction, though it often has economic consequences and may be economically motivated.

(b) Some Problems With Real GDP Per Capita as a Measure of Well-Being

Perhaps changes in real disposable income per capita would be a more precise measure of trends in the economic well-being of a country's inhabitants. Yet this measurement itself may have some serious problems when used in a lengthy time-frame. Real government spending has grown dramatically in many OECD countries during the past three decades. A significant part of this growth is due to new social programs which substitute government expenditure for personal expenditure. Government-run health insurance schemes such as the Ontario Hospital Insurance Plan (OHIP) exemplify such programs. Although OHIP generally requires Ontario residents to pay premiums, these cover only a fraction of the plan's outlays. Thus public expenditure on health care substantially replaces personal expenditure. When government spending supplants private spending, taxes are, not surprisingly, higher than they would otherwise be, and personal disposable income is correspondingly lower. Statistics on personal disposable income therefore understate the overall well-being of individuals. The extent of this understatement changes with the introduction or termination of government programs that replace personal expenditure. In a country like Sweden, where such programs have grown to significant size over the course of the past three decades, growth in real personal disposable income per capita may be no more accurate a measure of improvement in economic well-being than is growth in real GDP per capita.

Whether real disposable income per capita, or real GDP per capita, is used, economic well-being will be underestimated for another reason. The value of leisure time is both intuitively obvious and has been recognized in various economic models of labour supply [see, for example, Becker (1965)]. Yet national accounts data effectively treat leisure time as having zero value. As the standard work-week has shortened in each of the eight countries, the extent of the understatement of economic well-being has thus increased.

Another source of inaccuracy is the fact that currency units are not directly translatable into units of utility ("utiles"). Consumers presumably derive less utility on average from defense spending than from comparable spending on consumer goods. This suggests that economic well-being might be relatively overstated by U.S. figures on real GDP per capita, since American military spending is disproportionately greater than such spending in the other seven countries.

(c) Employment Data

In each of the eight countries, inter-censual data on employment are estimates based on surveys of employers or of individuals. Such numbers cannot be treated as exact head-counts.

(iii) REAL GROSS DOMESTIC PRODUCT (real GDP)

As Table B1 shows, real GDP grew strongly during 1956-66 in most of the eight countries. Japan's growth averaged a breathtaking 8.9% per annum: real output in 1966 was almost 2 1/2 times that of 1956. Average annual growth was in the neighborhood of 4-5% in each of the other countries except the U.K. In contrast, Britain's real output grew at a relatively sluggish 2.9% per annum.

During 1966-76, the average pace of real GDP growth was somewhat slower in each country. Japan still led the way, almost doubling its real output with a 7.0% average annual growth rate. The Canadian and French economies also had vigorous growth, averaging 4.7% per annum. In Australia, West Germany, the U.S. and Sweden, GDP growth was in the range 3-4% per annum. The U.K. again was the laggard, with average annual growth of only 2.5%.

Real output grew much more slowly in each country during 1976-86. Indeed, the pace of growth in France and Sweden was less than half that of the previous period. As usual, Japan had the fastest growth--4.2% per annum--yet this was unspectacular relative to the previous two decades. Canada, Australia and the U.S. posted moderate growth, but the average annual increase was 2% or less in West Germany, the U.K. and Sweden.

Table B2 indicates the cumulative effect of this economic growth over the thirty-year period. In 1986, Japan's real GDP was 7 times that of 1956; real output in Canada, France, Australia, West Germany, and the U.S. was about 3 times the size; while in Sweden and Britain, real GDP had roughly doubled.

(iv) REAL *GDP* PER CAPITA (RGDPPC)

When looked at on a per-capita basis, growth in real output was not quite as impressive. The differences are, of course, greatest for the countries with the most rapid increases in population--Canada, Australia and the United States.

Japanese RGDPPC grew at a heady 9.0% per annum during 1956-66, as Table B3 shows. Average annual growth was in the range of 3-4% in France, West Germany and Sweden. In the other four countries, growth averaged only 2-3% per annum.

In the next period, 1966-76, the pace of growth quickened significantly in Canada and Australia, but slowed appreciably in Japan, the U.S., West Germany and Sweden. French and British growth continued at about the same rate as in the first period. Japanese growth was well ahead of the other countries, averaging 5.6% per annum during 1966-76. Average annual RGDPPC growth was in the range of 3-4% in France, Canada, Australia and West Germany; and 2-3% in Sweden and the U.K. American RGDPPC increased by only 1.4% per annum.

During 1976-85, the pace of RGDPPC growth was markedly slower in Japan, France, Australia, Canada and Sweden. However, American RGDPPC actually grew more quickly than in the previous period. Japan again defined the upper end of the spectrum, posting a 3.6% annual increase. Growth was much more modest in the other seven countries, coming in the range of 1-2% per annum.

(v) EMPLOYMENT GROWTH

Employment growth is one of the few economic growth statistics that Japan does not dominate. Table B5 indicates that the Canadian economy created proportionately more jobs than any of the other seven countries during 1956-66 and 1966-76; and was only slightly behind the U.S. during 1976-85.

In the period 1956-66, Canada enjoyed a 2.6% average annual rate of employment growth. This edged out Australia's growth, and was much better than in any of the other six nations. Employment increased by more than 1% per annum in each of Japan, the U.S. and Sweden, but by less than 1% a year in West Germany, France and the U.K.

Canada again led the way during 1966-76, with an average annual increase of 2.7%. Australia and the United States both had employment growth of about 2% per annum. Yet the number of jobs grew by less than 1% per annum in Sweden, Japan and France, and actually declined slightly in the U.K. and West Germany. The American economy created jobs at a much brisker pace than in the first period, while job creation was appreciably slower in Japan.

During 1976-85, job-creation performance was slightly improved in West Germany, Japan, the U.S. and the U.K., but noticeably worse in Australia, Canada and France. The United States and Canada posted job gains of around 2% per annum, while employment growth averaged about 1% a year in Australia and Japan. The number of persons employed grew only slightly in Sweden, and declined almost imperceptibly in West Germany, France and the U.K.

While the rates of change in Table B5 fall within a narrow band, the effects of superior rates of employment growth are significant when cumulated over three decades. In 1985, Canadian employment was virtually twice that of 1956, while the number of jobs in Great Britain had actually declined marginally.

(vi) SUMMARY

Looking at long-term trends rather than cyclical phenomena, some patterns are clear. The eight nations generally had strong economic growth during the period 1956-86. Growth in the U.K. and Sweden was relatively lacklustre; but Japan enjoyed exceptional growth, transforming herself from a tiny, war-devastated economy into an economic superpower.

In each of the eight countries--including Japan--growth in real GDP slowed period by period. The fact that there are no exceptions to this pattern is at least in part a manifestation of international economic dependence. Also, note that the slowing trend in real GDP growth rates should not be confused with an on-going diminution in the absolute size of annual real GDP increases. For example, Japan's economy was so much larger in 1986 than it was in 1956 that 3% growth in 1986 would imply a greater absolute increase in real GDP size than would 9% growth in 1956.

The economic growth in each country enabled living standards to greatly improve. Again, the improvement was most dramatic in Japan, and relatively modest--albeit large in absolute terms--in Britain. Considering that the U.S. standard of living in 1956 was by far the world's highest, it is not surprising that, during the next three decades, citizens of other highly industrialized countries enjoyed greater improvements in their economic well-being than did Americans.

What may be somewhat surprising is that economic growth is not necessarily associated with job creation. Employment levels were fairly stagnant in the U.K., West Germany and France, yet the real output of each increased dramatically over the thirty years. This highlights the importance of productivity gains in improving economic well-being. On the other hand, the experiences of Canada and Australia demonstrate that massive job-creation is not inconsistent with strong economic growth.

TABLE B1

REAL *GDP**--AVERAGE ANNUAL % CHANGE

	1956-66	1966-76	1976-86
Australia	4.64	3.82	2.69
Canada	4.69	4.68	3.07
France	5.32	4.68	2.22
Japan	8.88	7.01	4.23
Sweden	4.20	3.24	1.59
U.K.	2.94	2.52	1.65
U.S.	3.87	3.31	2.77
W. Germany	5.37	3.40	2.00

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*Measured in constant national currency at purchasers' values.

TABLE B2

RATIO OF 1986 REAL *GDP* TO 1956 REAL *GDP*

Australia	3.0
Canada	3.4
France	3.3
Japan	7.0
Sweden	2.4
U.K.	2.0
U.S.	2.7
W. Germany	2.9

TABLE B3

REAL *GDP* PER CAPITA--AVERAGE ANNUAL % CHANGE

	1956-66	1966-76	1976-85
Australia	2.40	3.11	1.48
Canada	2.04	3.39	1.82
France	4.04	3.91	1.39
Japan	9.01	5.62	3.58
Sweden	3.43	2.70	1.45
U.K.	2.33	2.22	1.45
U.S.	2.16	1.39	1.60
W. Germany	4.04	2.95	2.05

TABLE B4

RATIO OF 1986 REAL *GDP* PER CAPITA TO 1956 REAL *GDP* PER CAPITA

Australia	2.0
Canada	2.0
France	2.5
Japan	5.7
Sweden	2.1
U.K.	1.8
U.S.	1.7
W. Germany	2.4

TABLE B5

EMPLOYMENT--AVERAGE ANNUAL % CHANGE

(% change in persons employed)

	1956-66	1966-76	1976-85
Australia	2.45[a]	2.11	1.28
Canada	2.57	2.66	1.97
France	0.36	0.63	-0.08
Japan	1.41	0.88	1.08
Sweden	1.02	0.92	0.56
U.K.	0.34	-0.21	-0.19
U.S.	1.19	1.89	2.08
W. Germany	0.78	-0.46	-0.02
The 8 nations as a whole	1.03[b]	1.04	1.17

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[a] 1954-1966. [b] Not including Australia.

(III) MANUFACTURING

(i) *Caveats*

The rubric "manufacturing" covers a vast gamut of industries and sub-industries. Not surprisingly, the characteristics and performance of these are greatly disparate. Treating this agglomeration as a meaningful category in its own right therefore requires some stretch of the imagination.

As well, official statistics on the manufacturing sector in any country should be viewed as estimates rather than as revealed truths.

(ii) Production

As Table C1 shows, production of manufactured goods increased substantially in each of the eight countries during the period 1958-66. The pace of increase was fastest in Japan--averaging a remarkable 14.9% per annum. In each of the other countries (except the U.K.), annual growth in manufacturing output was in the range of 5-7%. British growth was not quite as strong, but still averaged a respectable 4.1% per annum.

The rate of increase in manufacturing production was slower in each of the eight countries during 1966-76 than in the previous period. This deceleration was significant in each country except France, where the slowing was barely perceptible. Japan again had the highest growth rate, averaging 8.3% per annum. Even so, Japan's output of manufactured goods merely doubled in this period, compared with its tripling in the previous eight years. Average annual growth was in the neighborhood of 3-5% in France, Canada, West Germany, Sweden and Australia. Meanwhile, the American and British manufacturing industries experienced modest increases in output.

The pace of growth in manufacturing production was less favourable in each country during 1976-86, with the exception of a slight acceleration in the U.S. The Japanese growth rate of 4.6% per annum was stronger than that of the other countries, but much slower than in previous periods. The Canadian and American manufacturing industries formed the second tier, with average annual growth in the range of 2-3%. The pace of increases in production was slow, however, in West Germany, Sweden, Australia, and France. The U.K. actually experienced a slight decrease in manufacturing output.

(iii) Employment

As Table C2 indicates, employment growth in manufacturing during 1958-66 was strongest in Japan, at 4.3% per annum. The corresponding American and Canadian rates were around 2%. Growth in employment was slow in the U.K., West Germany and Sweden, while France experienced a significant decline of 4.2% per annum.

The period 1966-76 saw slow expansion in manufacturing employment in Japan, France, Swede, Australia and Canada, but slow declines in the other three countries.

Employment in manufacturing increased in only two of the eight countries during 1976-86. Even so, the growth in Japan and Canada was less than 1% per annum. American manufacturing employment had no net change over the period, while average annual declines were in the range of 1-2% in West Germany, Sweden, Australia and France. Also, employment in British manufacturing shrank by 3.2% per annum.

Table C3 shows manufacturing employment as a percentage of all civilian employment. When looking at advanced economies, international disparities in such statistics are not good indicators of different levels of economic development or wealth. For example, employment in manufacturing will tend to be relatively less important in countries--such as Canada, Australia and the United States--blessed with an abundance of natural resources and/or rich agricultural land. Intertemporal comparisons of the national data in Table C3 indicate a clear, general trend: the relative significance of manufacturing employment has been diminishing in each of the eight countries except Japan. This trend has been particularly strong in the U.K., Sweden, the U.S. and Australia, and appears to have started first in the United States. Relatively rapid growth of employment in the services sector likely accounts for much of the trend.

(iv) Labour Productivity

Table C4 looks at changes in labour productivity in the manufacturing sector, as measured by volume of production per person employed. This table indicates that in each of the eight countries, labour productivity improved during 1958-66, 1966-76 and 1976-86. In the first period, Japan posted the best improvement, averaging 10.2% per year. France's annual growth rate was slightly less than this, while Sweden's was 6.6%. In Canada, the U.S. and West Germany, average annual growth in labour productivity was in the range of 4-5%. The U.K.'s corresponding rate of

3.4% was also quite respectable.

In each country except West Germany, labour productivity trends in manufacturing were worse in the next period, 1966-76. Japan's 7.1% annual rate of improvement was still impressive, doubling the labour productivity levels in Japanese manufacturing. West German and French growth were in the order of 4-5% per annum, compared with 3-4% in Canada and the U.K. The other three countries experienced moderate rates of productivity improvement.

The pace of growth in labour productivity in the manufacturing sector during 1976-86 was typically slower in than in the previous period. In each of the eight countries, average annual growth was in the range of 2-4%.

Table C5 also looks at changes in labour productivity in the manufacturing sector--measured here in terms of value added per employee hour. Table C5 differs from Table C4 in some respects. Because the terminal year of coverage is not identical, direct comparisons between the tables are not possible in many cases. Even so, it seems fairly clear that Table C5 indicates stronger growth in French and Japanese labour productivity in the final period, and weaker growth in French productivity in the first period, than does Table C4. Other discrepancies do not appear to be major.

TABLE C1

MANUFACTURED GOODS--AVERAGE ANNUAL % CHANGE IN PRODUCTION

	1958-66	1966-76	1976-86
Australia	6.75	2.99	0.62[a]
Canada	6.91	4.13	2.58
France[b]	5.26	5.24	0.22
Japan	14.93	8.28	4.63
Sweden	7.11	3.53	0.96
U.K.	4.05	1.47	-0.12
U.S.	6.70	2.46	2.96
W. Germany	6.26	3.77	1.48
Dev'd Mkt Economies[c]	n/a	n/a	2.76[d]
Dev'g Mkt Economies[e]	n/a	n/a	5.75[d]
The world	7.62[f]	5.29	3.08

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[a] 1976-1985.

[b] The French data do not reflect clothing production.

[c] N. America, Europe (other than E. Europe and Yugoslavia), Australia, Israel, Japan, New Zealand, and S. Africa.

[d] 1975-1986.

[e] Caribbean, Central and S. America, Africa (other than S. Africa), Asia (other than Israel and Japan), and Yugoslavia.

[f] Based on value added at factor cost in constant U.S. dollars.

TABLE C2

MANUFACTURING--AVERAGE ANNUAL % CHANGE IN EMPLOYMENT

(% change in number of persons employed)

	1958-66	1966-76	1976-86
Australia	n/a	0.40[a]	-1.78[b]
Canada	1.98	0.37	0.32[b]
France	-4.16	0.83	-1.91
Japan	4.25	1.13	0.82
Sweden	0.32[c]	0.73[d]	-1.41[b]
U.K.	0.66	-1.63	-3.23
U.S.	2.36	-0.11	0.00
W. Germany	0.58[c]	-1.16	-0.81
The world	3.28	2.00	0.45[e]

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[a] There is a minor discontinuity at 1974/1975.

[b] 1976-1985. [c] 1962-1966. [d] 1970-1976.

[e] 1976-1983.

TABLE C3

MANUFACTURING EMPLOYMENT AS A % OF ALL CIVILIAN EMPLOYMENT

	1958	1966	1976	1985
Australia	n/a	29.1	24.7	18.9
Canada	23.0	24.3	20.3	17.5
France	28.1	27.4	27.3	23.2
Japan	20.9	24.4	25.5	25.0
Sweden	n/a	31.2	26.9	22.5
U.K.	37.3	34.9	30.3	23.8
U.S.	31.0	27.8	22.7	19.5
W. Germany	36.7	38.2	¦ 35.1[*]	32.0

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[*] Pre-1971 W. German data are not strictly comparable with data from 1971 onwards.

TABLE C4

MANUFACTURING--AVERAGE ANNUAL % CHANGE IN LABOUR PRODUCTIVITY

(% change in volume of production per person employed)

	1958-66	1966-76	1976-86
Australia	n/a	2.58[a]	2.44[b]
Canada	4.83	3.75	2.25[b]
France	9.83	4.37	2.17
Japan	10.24	7.07	3.78
Sweden	6.61[c]	1.56[d]	2.40[b]
U.K.	3.37	3.15	3.21
U.S.	4.24	2.57	2.96
W. Germany	4.20[c]	4.99	2.31
The world	4.20	3.23	1.93[e]

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[a] There is a minor discontinuity at 1974/1975.

[b] 1976-1985. [c] 1962-1966. [d] 1970-1976.

[e] 1976-1983.

TABLE C5

MANUFACTURING--AVERAGE ANNUAL % CHANGE IN LABOUR PRODUCTIVITY
(% change in value added* per employee hour)

	1956-66	1966-76	1976-84
Australia	n/a	n/a	n/a
Canada	3.92	4.01	1.86
France	5.84	5.99	4.49
Japan	8.58	9.37	6.17
Sweden	5.66	5.26	3.37
U.K.	3.37	4.15	3.07
U.S.	2.87	2.29	2.52
W. Germany	6.71	5.54	3.26

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*Converted into 1985 U.S. dollars.

(IV) INDUSTRY STATISTICS

(i) COAL MINING

(a) *Caveats*

Reliance can be placed on the production and employment data used to calculate Tables D1, D2 and D3, with two qualifications. First, the production figures relate to U.N.-defined "hard coal", whereas the employment figures relate to all types of coal. Second, the Australian figures reflect employment in petroleum and natural gas production as well as in coal mining.

Caution is warranted when looking at changes in labour productivity in coal mining. As the depth and complexity of a mine increases, mining becomes more difficult. Also, as a coal seam is depleted over time, the average grade of the ore mined tends to drop. The diligence and skillfulness of mine workers can only slow this decline, or perhaps temporarily postpone it. Thus changes in labour productivity would be more truly comparable and more fairly measured if calculated on the basis of quantity of ore mined rather than quantity of mineral extracted. Unfortunately, national statistics on quantity of ore processed are not readily available, so figures on hard coal production have been used here. Finally, when comparing absolute levels of labour productivity in coal mining, one should keep in mind that open-pit operations will have a substantial advantage over underground collieries.

(b) Production

As Table D1 indicates, during the period 1956-66, production declined in the majority of the eight nations. Although the average annual rates of shrinkage were modest in Canada, the U.K., West Germany and France, Sweden's output of hard coal was collapsing at 18.1% per annum. Japanese and American production grew slightly, while Australian output increased at a respectable pace of 4.9% per annum. During 1966-76, the growth rate of Canadian production, averaging 9.4% per annum, edged out that of Australia. Japan also had a turn-around, but in a negative direction: Japanese hard coal output shrank at an annual rate of 9.8%. The rate of decline in French production sharpened markedly as well, and the industry in Sweden continued its collapse.

Over the period 1976-86, Australian production again grew rapidly, at 8.9% per annum. Canada and the U.S. posted more modest increases, while production declined slowly in the other countries (except Sweden, as noted above). For the eight countries as a whole (not including Sweden), output of hard coal grew at a modest rate in this third period, compared with imperceptible growth in the second period and a trivial decline in the first. In all three periods, production grew significantly in Australia, going from 19.6 million tonnes in 1956 to 159.7 million tonnes in 1986. Also, output grew slowly in the United States and declined slowly in West Germany and the U.K. in each of the three periods.

Production tends not to be subject to huge year-to-year swings or aberrations. Figures for the U.K. contain a notable exception to this: due to strikes, hard-coal production in 1984 was only 42.9% of that in the previous year.

(c) Employment

Table D2 shows that for each of six of the countries, the average annual rate of decline in employment in hard-coal mining was in the range of 4-6% during 1956-66. Employment declined much more quickly in Sweden and Japan, although the former's workforce was minuscule to begin with. Much more significant was the case of the Japanese industry, which by 1966 had lost 214,000 of the 358,000 workers it had had in 1957. During the period 1966-76, employment in Japanese hard-coal mining again contracted rapidly, at an average rate of 13.4% per annum: 1976 employment was less than one-quarter of the 1966 level. France, the U.K. and West Germany each had an average annual decline in the range of 5-7%. Canadian employment was constant over the period, while the U.S. and Australia both had significant increases.

In the period 1976-84, employment in hard-coal mining continued to decline significantly in France and Japan, with somewhat slower declines in the U.K. and West Germany. There were significant increases in Australia and Canada, however.

(d) Labour Productivity

As Table D3 indicates, labour productivity in hard-coal mining improved in most countries in each of the three periods 1956-66, 1966-76 and 1976-84. In the first period, only Sweden posted a decline. The marked annual deterioration of 8.6% was due to production plummeting even faster than employment. Australia and Japan had strong improvements in productivity, and the U.S. experienced significant progress, while the others had moderate productivity growth. In the second period, 1966-76, the French industry's labour productivity experienced a trivial decline, while in the U.S. the decline was modest but tangible. Productivity in the Canadian industry rose sharply by 9.4% per annum, but the other countries experienced only moderate rates of improvement. During 1976-84, rates of productivity growth were uniformly modest, with Australia's average annual increase of 4.3% leading the group.

In absolute terms, the industry's labour productivity in 1984 was vastly higher in Australia and Canada than in the other countries, with the probable exception of the U.S. (Comparable, recent American data is not available.) The primary explanation for these productivity disparities likely involves the richness of the ore bodies being mined, rather than the sophistication of the equipment used by the workers, or the workers' skill and diligence.

TABLE D1

HARD COAL--AVERAGE ANNUAL % CHANGE IN PRODUCTION
(% change in tonnes produced)

	1956-66	1966-76	1976-86
Australia	4.92	7.92	8.94
Canada	-2.96	9.43	3.92
France	-0.91	-7.41	-3.37[a]
Japan	0.98	-9.76	-1.38
Sweden	-18.08	-11.34	n/a[b]
U.K.	-2.37	-3.53	-1.37
U.S.	0.30	1.96	1.91
W. Germany	-1.88	-2.72	-0.95
The 8 nations as a whole	-0.53	0.11	1.97[c]
The world	1.95	1.71	3.02

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[a] 1976-1985.

[b] Sweden apparently ceased hard coal production ca. 1979.

[c] Not including France and Sweden.

TABLE D2

COAL MINING--AVERAGE ANNUAL % CHANGE IN EMPLOYMENT

(% change in number of persons employed)

	1956-66	1966-76	1976-84
Australia[a]	-4.16	4.34	3.41
Canada	-4.98	0.00	3.55
France	-4.54	-6.87	-4.72
Japan[b]	-9.62[c]	-13.44	-4.26
Sweden	-10.40	n/a	n/a[d]
U.K.	-4.78[e]	-2.19[f]	-3.20[g]
U.S.	-5.81	5.44[h]	n/a
W. Germany	-4.71	-5.54	-1.56
The 8 nations as a whole	-4.53[j]	-6.01[k]	n/a
The world	-2.47[m]	-1.90	0.86[g]

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[a] Australian data also reflect employment in petroleum and natural gas.
[b] Japanese figures are based on persons engaged.
[c] 1957-1966. [d] Sweden apparently ceased hard coal production ca. 1979.
[e] 1956-1968. [f] 1970-1976. [g] 1976-1983. [h] 1966-1977.
[j] Not including Japan.
[k] Not including Sweden and the U.S., but including Japan. [m] 1958-1966.

TABLE D3

COAL MINING--AVERAGE ANNUAL % CHANGE IN LABOUR PRODUCTIVITY

(% change in tonnes of hard coal produced per employee)

	1956-66	1966-76	1976-84
Australia[a]	9.47	3.43	4.34
Canada	2.13	9.43	1.94
France	3.81	-0.58	1.81
Japan[b]	10.56[c]	4.26	3.15
Sweden	-8.57	n/a	n/a[d]
U.K.	1.68[e]	1.95[f]	2.75[g]
U.S.	6.49	-2.92[h]	n/a
W. Germany	2.97	2.99	0.04
The 8 nations as a whole	4.10[j]	3.86[k]	n/a
The world	n/a	3.68	n/a

[a-k]: As indicated for Table D2 above.

(ii) STEEL INDUSTRY

(a) *Caveats*

Production figures for crude steel are ideally suited for international and intertemporal comparisons. Employment is another matter. National statistics are readily available on employment in iron & steel basic industries (ISIC 371), but not on employment that specifically relates to the manufacture of crude steel. The former, by necessity, have been used as the basis for calculations here.

This means that the numbers presented on labour productivity in Table E3 must be treated cautiously: the underlying production data is for crude steel only, but the underlying employment data relates to all iron & steel basic industries. This deficiency is not shared by Table E4, which gives absolute figures on labour productivity, as expressed in employee hours required per short ton of carbon steel shipped.

(b) Production

As Table E1 shows, the period 1956-66 saw crude steel production grow in every one of the eight nations. Japan led the way, with a remarkable 15.7% average annual increase--more than quadrupling output over the period. The steel industry also experienced strong growth in Australia, Sweden and Canada, each enjoying a rate of increase in the range of 6-8% per annum. In the other countries, however, the pace of growth in production of crude steel was much more moderate. For the eight nations as a whole, the industry's growth averaged 3.7% per annum--a significantly slower rate than the world's 5.5% per annum.

In the period 1966-76, the steel industry's rate of growth slowed considerably in each of the eight countries. Japanese growth still averaged a vigorous 8.4% per annum, but the industry's pace of growth was moderate in Canada and Australia, and distinctly slow in West Germany, France and Sweden. Modest declines were posted in the U.S. and the U.K. In the group as a whole, crude steel production increased by an average of 2.3% per annum.

During 1976-86, only Canada posted an increase (albeit a tiny one) in crude steel output. Meanwhile, production in the Australian, West German, Japanese and Swedish industries shrank slowly. Moderate rates of decline were experienced in the other countries. Of these, the U.S.'s crude steel output shrank the fastest, at an average annual rate of 4.5%. The year 1982 was particularly important for the American steel industry, as its production collapsed by 39% compared with the previous year. This allowed Japanese steel output to decisively eclipse its American counterpart in 1982--a dominance that has continued in each year thereafter, due to the slowness of the U.S. industry's recovery towards pre-1982 production levels. Similarly, the U.K. industry has yet to return to its pre-1980 production levels.

(c) Employment

Table E2 indicates that during 1958-66, employment in the iron & steel basic industries grew slowly in the U.S. and the United Kingdom, and at moderate rates in the other countries. Japanese employment growth, averaging 5.2% per annum, set the pace. Over the period 1966-76, only France saw significant growth. Canadian employment increased at a sluggish pace, and Australia's was virtually stagnant. Japan and Sweden had marginal declines, while there were modest rates of shrinkage in employment levels in the iron & steel basic industries of each of the other countries.

Each of the eight countries had shrinkage over 1976-84. This was very rapid in the U.K. and West Germany. The latter had one particularly traumatic drop: in 1983, the employment level of 321,000 was 31.7% lower than the previous year's level of 470,000. Shrinkage in the U.S. and Sweden was substantial, though much more impressive in the U.S. because of the absolute number of persons involved. The American industry's employment level in 1983 was 33.7% lower--or 244,000 persons fewer--than that of 1981. French and Australian employment each declined in the range of 4% per annum. The rate of shrinkage was quite slow, however, in Japan and Canada. All year-to-year changes in France and Japan were gradual.

(d) Labour Productivity

In the majority of the countries, all three periods saw labour productivity improve in the steel industry. However, Table E3 suggests that for each of Australia, Japan and the United States, the average pace of productivity improvement slowed period by period. The pattern of the Canadian steel industry is similar, except that its productivity appears to have declined in the final period.

During the first period, 1958-66, labour productivity in the Japanese steel industry grew swiftly at 12.8% per annum. The Canadian average annual growth rate of 5.9% was also substantial. Moderate rates of improvement were posted in the other countries, with one exception: the West German industry's productivity deteriorated slightly.

Over 1966-76, productivity worsened only in France. The steel industry in each of the other nations (except Japan) experienced modest gains in labour productivity. However, the Japanese industry's productivity continued to improve rapidly, at 8.5% per annum.

In contrast, the period 1976-84 saw slight improvement in Japan. Australia and the U.S. likewise had slow improvement. The West German industry posted the best increase in labour productivity, averaging 7.9% per annum. The U.K. and Sweden also had substantial growth, while the Canadian steel industry's labour productivity deteriorated at a moderate rate.

Table E4 puts productivity into a somewhat different perspective, showing absolute labour productivity in steel production. (Regrettably, the scope of Table E4 is limited with respect to both years and countries.) The number of employee hours required per short ton of carbon steel shipped declined sharply (i.e. labour productivity improved) in Japan, France and West Germany during 1964-80. The improvement in the Japanese steel industry is particularly striking: employee hours per ton dropped almost 72%, going from 26.0 hours in 1964 to 7.3 hours in 1980.

In contrast, Table E4 indicates that labour productivity was fairly stagnant in the British and American steel industries. The former seems to have been stuck in a sort of time warp. While the labour productivity of U.K. steel producers was reasonably competitive in 1964, its failure to keep pace with improvements in other countries made it pathetically uncompetitive by 1980. The American industry, on the other hand, appears to have fallen victim to smugness. In 1964, U.S. steel producers made steel using only half the employee hours required in other countries.

Failure to significantly improve on this high productivity level eventually allowed the steel industries of other countries to catch up to, or even surpass, the American industry. Japanese steel producers had, by 1976, exceeded the labour productivity of their American counterparts; yet they were not content to rest on their laurels. In 1980, it took the U.S. steel industry a substantial 41% more employee hours per ton than in Japan. Labour productivity in the American industry was by this time merely average.

TABLE E1

CRUDE STEEL--AVERAGE ANNUAL % CHANGE IN PRODUCTION
(% change in tonnes produced)

	1956-66	1966-76	1976-86
Australia	8.15	3.46	-1.49
Canada	6.58	3.75	0.69
France	3.87	1.72	-2.60
Japan	15.71	8.44	-0.88
Sweden	6.97	0.78	-0.88
U.K.	1.64	-1.03	-4.06
U.S.	1.53	-0.47	-4.55
W. Germany	2.89	1.85	-1.32
The 8 nations as a whole	3.72	2.31	-2.34
The world	5.48	n/a	0.54

TABLE E2

IRON & STEEL BASIC INDUSTRIES-- AVERAGE ANNUAL % CHANGE IN EMPLOYMENT

(% change in number of persons employed)

	1958-66	1966-76	1976-84
Australia	3.16	0.00	-4.01
Canada	4.80	0.61	-0.25[a]
France	n/a	4.63	-4.33
Japan	5.24	-0.04	-2.18[b]
Sweden	5.06	-0.29[c]	-5.26
U.K.	0.07[d]	-3.30[e]	-9.53[b]
U.S.	2.62	-1.82	-6.67[b]
W. Germany	4.11	-1.52	-8.01
The 8 nations as a whole	3.19[f]	-0.83	n/a

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[a] 1976-1982. [b] 1976-1983.

[c] There may be a minor discontinuity in the Swedish time series at 1967.

[d] 1958-1968. [e] 1970-1976.

[f] Not including France.

TABLE E3

STEEL INDUSTRY--AVERAGE ANNUAL % CHANGE IN LABOUR PRODUCTIVITY

(% change in tonnes of crude steel produced per employee in iron & steel basic industries)

	1958-66	1966-76	1976-84
Australia	4.14	3.46	0.95
Canada	5.89	3.12	-1.44[a]
France	n/a	-2.78	1.94
Japan	12.80	8.48	0.75[b]
Sweden	3.62	1.07[c]	4.39
U.K.	1.52	1.15	5.40[b]
U.S.	3.12	1.38	0.74[b]
W. Germany	-0.33	3.42	7.91
The 8 nations as a whole	3.64[f]	3.17	n/a

[a-f] As indicated for Table E2 above.

TABLE E4

ABSOLUTE LABOUR PRODUCTIVITY IN STEEL PRODUCTION

(employee hours required per short ton of
carbon steel shipped, at actual operating rates)

Year	France	Japan	U.K.	U.S.	W.Ger.
1964	25.61	26.03	25.43	12.32	22.39
1972	16.32	11.85	19.59	10.61	13.44
1976	15.75	9.16	21.02	10.30	11.89
1980	11.59	7.33	18.86*	10.37	9.85

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*Data for 1979.

(iii) MERCHANT SHIPBUILDING

(a) Caveats

Measuring the true output of shipyards in a given year is not easy. This is because it typically takes more than one year to build a ship. If careful records are kept then the accounting cost of work-in-progress is known, allowing the accounting cost of the work done in that year to be calculated. However, it seems that most countries do not publish national tallies of such calculations. Even where such figures are available, their meaningfulness is suspect (particularly when making intertemporal and international comparisons) because their unit of measurement is nominal accounting units of currency.

A measure of the physical quantity of production is inherently more meaningful for purposes of comparison. Unfortunately, there is no truly satisfactory physical measurement of a shipyard's production in a given year. The number of ships launched is a useless statistic because it mixes apples and oranges: the tally of production increases by exactly the same amount for the launching of a moderately-sized freighter as for a supertanker. It seems much more sensible to look at some measure of tonnage.

One such measure is gross registered tonnage launched--a figure calculated on the basis of each ship's enclosed space. This is a fairly crude measurement of shipbuilding activity in a given year, since most of the ships completed that year were begun in previous years. As well, work done in a given year on ships that will be launched later obviously is not reflected in statistics on that year's launchings. Nevertheless, data on gross registered tonnage launched seems to be the only readily available basis for comparing changes in shipbuilding production among nations and across time, and so is used here.

Two additional elements of unreliability are introduced when labour productivity is calculated for shipbuilding. First, it is rare to find national data that differentiate between those shipyard workers who constructed ships and those who merely repaired ships in a given year. The latter were consolidated with the former in the data used to calculate the statistics presented here. Thus these statistics on changes in labour productivity naively assume that in a given country, the ratio of shipbuilders to ship-repairers remained constant.[1] Second, a given shipyard may experience sharp discontinuities in its activity level due to the extremely lumpy nature of the demand for its product.[2] After a ship is launched, the people who built it have no more shipbuilding work to do unless and until someone contracts with shipyard to build another ship. But workers may not be given notice of indefinite layoff if a contract is in sight. Such a slack period will obviously depress labour productivity figures. There is not enough information available, however, to allow an estimate of the extent of this distortion.

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[1] French statistics suggest surprising stability in this ratio, as least so far as construction and repair of fishing vessels are concerned. Over 1972-76, the ratio of French shipyards building fishing vessels to those building or repairing them dropped from 74.8% to 51.7%; yet the corresponding employment ratio changed far less markedly, going from 88.2% to 82.0%: France (1978), p. 199, Table 9.

[2] It is interesting to note that even at a national level of aggregation, figures for gross registered tonnage launched are highly volatile for many countries, and often have marked discontinuities from year to year. The lumpiness of the product (ships) must partially explain the exceptional volatility of the merchant ship output of the smaller nations, such as Canada and Australia. For countries with a small shipbuilding industry, the launching of one additional ship may make a big difference.

(b) Production

As Table F1 indicates, the average annual changes in merchant shipbuilding output in the periods 1956-66 and 1966-76 varied widely by country. For example, production of merchant ships was shrinking in the U.K. at an average annual rate of 2.4% in the first period, while in Canada it was growing at a rapid clip of 21.4% annually.

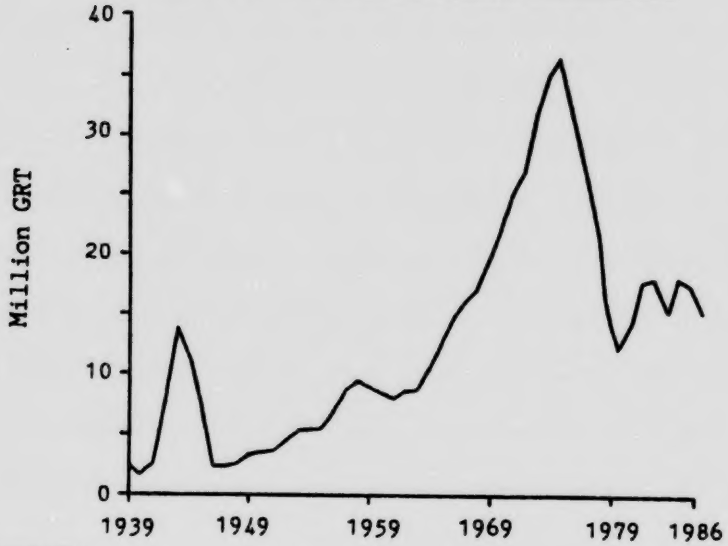
As well, a comparison of those two periods typically shows significant differences in the rate of change for each of the eight nations, but with no obvious pattern. Canada, Japan and Australia maintained extremely rapid rates of increase in the first period, while the United States and France were the growth stars in the second period. However, in the second period, the average annual rate of growth in merchant shipbuilding output for the eight nations as a whole (and for the world) differed minimally from that in the first.

The third period, 1976-86, contrasts sharply with the first two. For each of the eight nations, production of merchant ships declined sharply. The rate of decline varied among the countries. Australia simply ceased making large ships in 1978. Output contracted at annual rates of over 30% in Canada and Sweden during the decade, so that the gross tonnage launched in each of these two countries in 1986 was less than three percent of that launched in 1976. The industries in France, the U.K., West Germany, and the U.S. also shrank rapidly. Output levels in 1986 in those countries were mere fractions of those of 1976. Even though merchant shipbuilding output shrank least in Japan, the compounded effect of a 5.9% average annual shrinkage rate over the decade still meant that the Japanese industry's production in 1986 was only 54% of 1976 levels.

For the eight countries as a whole (excluding Australia), 1986 output was just 40% of the level in 1976. Indeed, as Figure F shows, production of ships in the free world peaked in 1975 and then plummeted:

FIGURE F

FREE-WORLD SHIPPING OUTPUT, 1939-1986



(c) Employment

As Table F2 indicates, during the period 1958-66, employment in merchant shipbuilding did not change dramatically: average annual growth in Canada of 2.0% edged out the U.S. and Japan, while West Germany's annual shrinkage of 3.9% was faster than that in the other of the eight nations. For the eight nations as a whole, employment declined at a modest average annual rate of 1.1% during this period, but grew at 0.7% annually during 1966-76. Comparing these two periods, a relative improvement is apparent for every country but Canada; although in the case of the U.K. and West Germany, the improvement is merely a slowing in the rate of shrinkage. France's merchant shipbuilders, which set the second period's pace with employment growth of 4.5% per annum, were also the big turn-around story, having experienced an annual employment shrinkage of 2.4% during the first period. Overall, rates of change in employment levels were small during the second period.

During 1976-84, employment in merchant shipbuilding fell in each of the countries. Sweden led the retreat, with an average annual shrinkage rate of 10.5%, so that its 1984 employment level was only 41% of that in 1976. Japan, the U.K., West Germany and France also experienced substantial declines in employment.

(d) Labour Productivity

Labour productivity changes in merchant shipbuilding were mixed during 1958-66, as Table 3 shows. Although Australia, the U.K. and West Germany had trivial changes, labour productivity in the United States plummeted by 18.3% per annum during this period. The American problem arose from a combination of substantially lower output and somewhat increased employment. Meanwhile, strong labour productivity growth in Sweden and Canada looked anemic compared with the average annual growth rate of 15.4% in labour productivity enjoyed by Japanese merchant shipbuilders during this period. For the eight countries as a whole (except France), labour productivity growth was a very respectable 7.3% per annum.

Labour productivity growth was extremely uniform during 1966-76. Only in one country were merchant shipbuilders outside the range of 4-6% per annum. The U.S. industry regained much lost ground by posting a remarkable average annual growth rate in labour productivity of 17.8% for the decade. Due largely to the American performance, the industry's 1966-76 labour productivity growth rate for the eight nations as a whole was 6.7% per annum. However, during the period 1976-84, the United States had the worst record of deterioration in labour productivity, with declines averaging 20.7% annually. Sweden's performance was only marginally better; and Japan alone did not suffer an alarmingly rapid decline in the labour productivity of its merchant shipbuilders during this third period. In general, labour productivity was deteriorating because industry employment was not being reduced as quickly as output was falling.

(e) The Military and the U.S. Industry

As Table F4 indicates, the value of ship repair work has increased greatly in importance in the U.S. commercial shipbuilding & repair industry. Indeed, comparing 1979 and 1983 figures, one sees that shipbuilding and ship repair traded places in terms of relative value--ship repair accounting for almost two-thirds of U.S. commercial work in 1983. In current dollar terms, however, the 1983 value was virtually the same as that for 1981, when construction and repair work had equal value. The reason for the reversal in relative values is that the absolute value of ship repairs jumped during 1979-81, and the absolute value of shipbuilding declined during 1979-83. Finally, note that even the nominal value of U.S. commercial work was lower in 1983 than in 1979.

The military sector of the American shipbuilding & repair industry did not experience the commercial sector's shift toward repair work. As Table F5 shows, the relative values of construction and repair work in the military sector remained quite constant during 1979-83. In terms of nominal value, however, both activities grew strongly. This growth was the result of a conscious policy decision of the Reagan administration to substantially expand American naval forces, while repairing and refitting ageing vessels.

Table F6 indicates that military work has been a crucial buffer for the American industry. Military spending on shipbuilding & repair was over 94% higher in 1984 than in 1979, whereas sales in the commercial sector were more than 60% lower, in nominal terms. Consequently, the commercial sector's share of total industry sales fell from about one-third in 1979 to less than 10% in 1984. The increased volume of military spending pushed total industry sales up, however, by over 44%.

Table F7 traces the collapse of capacity utilization in the commercial sector of the American industry. The capacity utilization rate for shipbuilding and repair facilities stood at 18.8% in 1984, compared with 79.5% in 1979. The drop was even more extreme for shipbuilding in particular, falling from an extremely high capacity utilization rate of 95.7% in 1979 to a pathetically low 8.9% in 1984.

The ameliorating effects of military spending are confirmed in Table F8. Sharp declines in the number of production workers employed in the commercial sector were more than offset by employment gains in the military sector. Thus in 1984, the American shipbuilding & repair industry *in toto* employed slightly more production workers than in 1979.

It seems likely that military contracts would have had similar--but perhaps not quite as dramatic--ameliorating effects in the shipyards of France and Great Britain.

TABLE F1

MERCHANT SHIPBUILDING--AVERAGE ANNUAL % CHANGE IN PRODUCTION

(% change in gross registered tonnage launched)

	1956-66	1966-76	1976-86
Australia	11.61	5.87	n/a[a]
Canada	21.40	4.47	-32.01
France	4.01	10.43	-20.94
Japan	14.37	7.91	-5.95
Sweden	9.03	7.43	-30.02
U.K.	-2.41	2.15	-15.81
U.S.	-0.12	20.39	-11.78
W. Germany	1.70	4.23	-12.70
The 8 nations as a whole	7.86	7.45	-8.74[b]
The world	7.92	8.06	-8.00

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[a] "Construction of large ships in Australia ceased in 1978": Australia, *Year Book Australia, 1986*, (Canberra, 1986), p. 466.

[b] Not including Australia.

TABLE F2

MERCHANT SHIPBUILDING & REPAIR--AVERAGE ANNUAL % CHANGE IN EMPLOYMENT

(% change in number of persons employed)

	1958-66	1966-76	1976-84
Australia	-0.80	1.83	-3.09
Canada	1.95	-1.00	0.00[a]
France	-2.41[b]	4.50[c]	-5.77
Japan	0.34	1.86	-8.11[d]
Sweden	-1.64	2.12	-10.53
U.K.	-3.08	-0.46[e]	-7.83[d]
U.S.	1.79	2.23	-1.98[d]
W. Germany	-3.94	-0.91	-5.87
The 8 nations as a whole	-1.11[f]	0.58[f]	n/a

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[a] 1976-1982. [b] 1957-1967. [c] 1967-1976.

[d] 1976-1983. [e] 1970-1976.

[f] Not including France.

TABLE F3

MERCHANT SHIPBUILDING--AVERAGE ANNUAL % CHANGE IN LABOUR PRODUCTIVITY

(% change in gross registered tonnage launched per employee)

	1958-66	1966-76	1976-84
Australia	-0.12	3.96	n/a
Canada	9.38	5.52	-12.28[a]
France	5.13[b]	4.25[c]	-14.06
Japan	15.41	5.94	-1.70[d]
Sweden	7.20	5.20	-19.17
U.K.	-0.09	4.11	-5.13[d]
U.S.	-18.33	17.76	-20.71[d]
W. Germany	1.68	5.19	-9.68
The 8 nations as a whole[e]	7.34	6.68	n/a

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[a] 1976-1982. [b] 1957-1967. [c] 1967-1976.
[d] 1976-1983. [e] Not including France.

TABLE F4

SHIPBUILDING & REPAIR--VALUE[a] OF U.S. COMMERCIAL WORK

	1979		1981		1983	
	$M	%	$M	%	$M	%
Constr.	$1890	64.2	$1542	49.1	$ 873	35.4
Repair	1052	35.8	1601	50.9	1596	64.6
Total	$2942	100.0	$3143	100.0	$2469	100.0

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[a] Current U.S. dollars.

TABLE F5

SHIPBUILDING & REPAIR--VALUE* OF U.S. MILITARY WORK

	1979		1981		1983	
	$M	%	$M	%	$M	%
Constr.	$2512	72.2	$3351	72.8	$3893	68.2
Repair	969	27.8	1251	27.2	1819	31.8
Total	$3481	100.0	$4602	100.0	$5712	100.0

---

*Current U.S. dollars.

TABLE F6

SHIPBUILDING & REPAIR--NET SALES* IN THE U.S.

	1979		1984	
	$B	%	$B	%
Commercial	$1.1	32.4	$0.435	8.9
Military	2.3	67.6	$4.465	91.9
Total	$3.4	100.0	$4.9	100.0

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*Current U.S. dollars.

TABLE F7

COMMERCIAL SHIPBUILDING & REPAIR-- CAPACITY UTILIZATION RATES IN THE U.S. (%)

	1979	1980	1981	1982	1983	1984
Joint*	79.5	45.7	48.0	50.0	25.1	18.8
Shipbldg only**	95.7	58.1	25.6	25.8	20.2	8.9

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*Capacity utilization rate for shipbuilding and repair combined, based on employment.

**Capacity utilization rate for shipbuilding only, based on production in gross registered tonnes.

TABLE F8

SHIPBUILDING & REPAIR--EMPLOYMENT OF PRODUCTION WORKERS IN THE U.S. ('000)

	1979	1980	1981	1982	1983	1984
Commercial	33.6	19.3	20.3	21.2	10.9	7.9
Military	50.9					82.0
Total	84.5					89.9

(iv) Passenger Automobiles

(a) *Caveats*

A lack of true comparability of output is the primary difficulty here. Automobiles of different manufacturers and years obviously can differ tremendously--both qualitatively and in quantifiable terms. A 1958 Cadillac Seville is not the same thing as a 1984 Chevrolet Chevette, nor does a 1971 Volkswagen Beetle have much in common with a 1982 Lamborghini Countach. Neither sales nor value added, (even if expressed in "constant dollars"), satisfactorily measure output for purposes of international and intertemporal comparison. There are several reasons for this, including currency fluctuations, price discrimination between markets, temporary rebate programs and dealer discounts, non-comparable warranty programs, and the potentially significant cost of "options" (some of which may not be truly optional). A measurement of physical output would therefore seem preferable.

Measuring automobile production by the tonne may have seemed reasonable at one time, but concerns about fuel economy and "downsizing" have made this approach somewhat obsolete. The average weight of cars made today is only a fraction of that of pre-1973 model years, yet a strong argument can be made that modern cars are superior. Also, automakers are striving to further reduce the weight of their products. Measuring production (and hence productivity) in terms of weight thus would appear to preclude meaningful intertemporal comparisons, especially over the long term.

An alternate approach is to simply count production in units. This yields numbers that have greater intertemporal comparability than do figures on tonnage. Even so, one must conscious of the great heterogeneity of automobile production, even that of a given manufacturer in a given country in a given year. Data expressing production in units is readily available, however, and has been used as the basis for amounts calculated here.

Another *caveat* relates to the data used for Japanese employment. These figures reflect employment in the manufacture of three-wheeled vehicles and motorcycles, as well as employment in the manufacture of passenger automobiles.

A final *caveat* is that the number representing a country's average annual change in production for a specified period may give a misleading impression of smooth growth or decline. Figure G illustrates this point. American auto output varied greatly during 1966-76, though that period's average annual decline of 0.1% might seem to suggest great stability.

(b) Production

As Table G1 indicates, automobile production during 1956-66 grew very rapidly in Sweden, Australia, West Germany and France, while strong growth was also experienced in the British and Canadian auto industries. American auto output fluctuated significantly over this period, but was higher at the period's end than at its beginning. Output in Japan skyrocketed, with a dramatic average annual increase of 39.2%. By 1966, Japanese auto production was over 27 times that of 1956: 877.7K units versus 32.1K units.

During 1966-76, Japanese output grew almost another six-fold, with an average annual increase of 19.1%. By contrast, American auto production was marginally lower in 1976 than in 1966. The French and

Swedish industries both experienced significant output growth, however, and the other countries had moderate growth in this period.

The period 1976-86 saw automobile production increase moderately in Japan, and slowly in Sweden and West Germany. The other countries posted modest declines in output.

FIGURE G:

"CARWARS"--U.S. AND JAPANESE PASSENGER AUTO PRODUCTION, 1956-1986

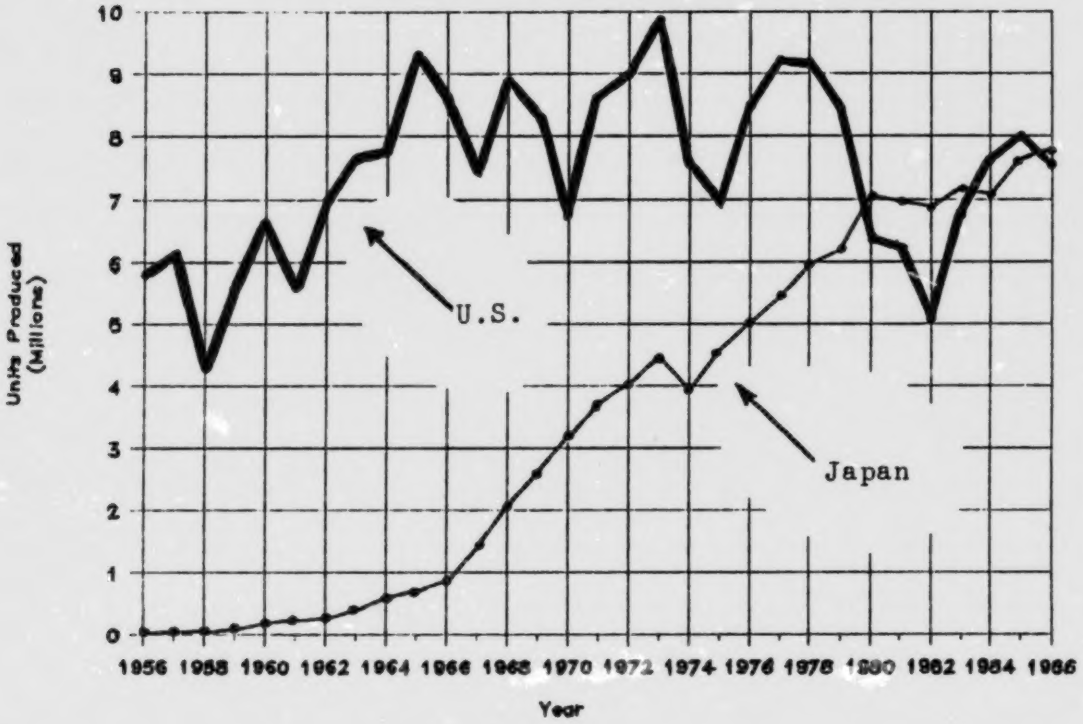

Figure G, which plots American and Japanese auto production over 1956-86, illustrates some interesting points. Although the pace of the Japanese industry's growth has been slowing over time, its output has had only one noticeable downturn, in 1974. But this downturn was a minor blip compared with any of the numerous precipitous drops experienced by the U.S. industry. American auto production clearly is sharply cyclical, and has not had solid, base-building growth since at least the early 1960s. It has gyrated wildly while the Japanese industry has built success upon success. As Figure G shows, Japan's annual volume of auto production has seriously rivalled that of the U.S since 1980. Indeed, the Japanese industry's output exceeded its American counterpart's in all but two of the years since 1980.

(c) Employment

During 1958-66, employment in the auto industry grew in each of the countries, as Table G2 indicates. Growth was fastest in West Germany and Japan, averaging slightly less than 12% per annum. Employment expanded strongly in the Canadian industry as well, by about 8% annually. In each of the other countries, growth was in the range of 3-5% per annum.

The pace of auto industry employment growth in each country was markedly slower in the second period, 1966-76. This slowing is particularly conspicuous in the cases of West Germany and Japan. The U.K. also stands out, since there the industry's employment actually declined slightly. Only Sweden's auto industry had better than modest growth in employment, with a respectable average annual increase of 7.3%.

During 1976-84, auto industry employment levels shrank at moderate rates in Australia, the U.S. and Canada, while shrinking on average by 3.6% per annum in France and by 6.2% per annum in the U.K. In the other countries--West Germany, Japan and Sweden--the industry's employment grew at modest rates.

(d) Labour Productivity

Labour productivity improved during 1958-66 in the automobile industries of each of the six countries for which data is available, as Table G3 indicates. The Japanese industry's labour productivity in 1966 was more than seven times that of 1958, having grown at an average annual rate of 28.0%. Improvements in the other countries were less spectacular. Output per employee grew at 7.6% per annum in the Australian auto industry, and in the range of 4-5% in France and the U.S. The Canadian industry experienced a moderate pace of improvement, while labour productivity in the U.K. was virtually unchanged. For the eight nations as whole, growth averaged 3.4% per annum.

During the period 1966-76, the rate of change in labour productivity was less favourable in each country. Indeed, for the eight nations as a whole, the average annual growth rate slowed to 2.3%. Productivity growth slackened somewhat in the Japanese auto industry, but nevertheless averaged an exceptional 15.9% per annum. France experienced solid growth of 4.3% annually, while the Australian and Canadian industries posted modest improvements in labour productivity levels. West German growth was very sluggish, and labour productivity declined slowly in the other countries.

Trends in the auto industry's labour productivity worsened during 1976-84 in most of the eight countries--the exceptions being the U.K., Australia and the United States. The Japanese industry's average annual growth rate of 3.2% was the highest of the eight, yet was only a fraction of the Japanese growth rates in previous periods. The U.K., France and Australia experienced growth in the neighborhood of 2-3% per annum. Of the three countries whose labour productivity had declined in the period 1966-76, only the United Kingdom had positive labour productivity growth during 1976-84. Labour productivity in the U.S. auto industry continued to decline, albeit at a slower rate, while the deterioration in Sweden accelerated. West Germany and Canada experienced moderate declines, in contrast to their previous growth.

Labour productivity has been relatively volatile in the American automobile industry. These variations are associated with fluctuations in the business cycle. Because the number of autoworkers employed in the U.S. is adjusted somewhat when production fluctuates, changes in labour productivity are more moderate than changes in output.

It appears that labour productivity in the Japanese auto industry surpassed that in the American industry in the mid-1970s. This is debatable, however, since the levels of labour productivity observed in the auto industry may depend significantly on the method of measuring labour productivity. Mayer (1983) purported to measure real gross value added per man-hour in the U.S. and Japanese industries, and claimed that in 1975, the level of labour productivity of American auto makers markedly exceeded that in Japan [pp. 98-103].

TABLE G1

PASSENGER AUTOMOBILES--AVERAGE ANNUAL % CHANGE IN PRODUCTION

(% change in number produced)

	1956-66	1966-76	1976-86
Australia	14.31	2.31	-1.48
Canada	6.22	5.21	-0.69
France	10.51	6.76	-1.98
Japan	39.21	19.07	4.50
Sweden	16.48	6.95	1.81[a]
U.K.	8.53	-1.83	-2.65
U.S.	3.99	-0.12	-1.22
W. Germany	12.00	2.29	1.88
The 8 nations as a whole	6.93	3.46	0.61[b]
The world	n/a	4.14	1.11[a]

---

[a] 1976-1985. [b] Not including Sweden.

TABLE G2

PASSENGER AUTOMOBILES--AVERAGE ANNUAL % CHANGE IN EMPLOYMENT

(% change in number of persons employed)

	1958-66	1966-76	1976-84
Australia	5.20	0.25[a]	-3.14
Canada	7.95	3.13	-2.18[b]
France	3.08	2.29	-3.59
Japan[c]	11.58	2.76	1.88[d]
Sweden	n/a	7.26	1.14
U.K.	3.37[e]	0.34[f]	-6.15[d]
U.S.	4.63	0.96	-2.78[d]
W. Germany[g]	5.17	1.95	2.94
The 8 nations as a whole	5.88[h]	1.49[j]	n/a

---

[a] There is a minor discontinuity at 1974/1975.

[b] 1976-1982.

[c] Japanese figures reflect employment in production of three-wheeled vehicles and motorcycles, as well as passenger automobiles.

[d] 1976-1983. [e] 1958-1968. [f] 1970-1976.

[g] Based on employment in motor vehicles production.

[h] Not including Sweden and W. Germany.

[j] Not including W. Germany.

TABLE G3

PASSENGER AUTOMOBILES--AVERAGE ANNUAL % CHANGE IN LABOUR PRODUCTIVITY

(% change in automobiles produced per employee)

	1958-66	1966-76	1976-84
Australia	7.57	2.05	2.22
Canada	2.81	2.01	-3.44[a]
France	5.15	4.34	1.77
Japan[b]	28.04	15.87	3.23[c]
Sweden	n/a	-0.30	-2.13
U.K.	0.25	-1.24	2.92[c]
U.S.	4.35	-1.07	-0.40[c]
W. Germany[d]	4.73	0.33	-2.07
The 8 nations as a whole	3.37[e]	2.31[f]	n/a

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[a] 1976-1982.

[b] Japanese figures reflect employment in production of three-wheeled vehicles and motorcycles, as well as passenger automobiles. [c] 1976-1983.

[d] Based on employment in motor vehicles production.

[e] Not including Sweden and W. Germany.

[f] Not including W. Germany.

(v) TEXTILES

(a) Caveats

The heterogeneity of textiles means that the best measurements of output are the indices of production calculated by the United Nations and the OECD. International comparisons would be on shaky ground if production were measured in financial units. Also, it would be silly to simply sum the respective surface areas of the various textiles produced.

Composite indices are, of course, estimated values rather than directly observable values. Indeed, a set of assumptions is associated with each base year; so inconsistencies and errors may be injected when series with different base years are linked (as has been necessary here). The values calculated in Tables H1 and H3 should therefore be treated with considerable caution. Note also that figures relating to textiles production or labour productivity for the eight countries as a whole are not presented here, since index numbers are not summable.

(b) Production

Textiles output grew in all but one of the countries during 1956-66, as Table H1 indicates. The U.K. industry's slow decline made it the outlier. The Japanese industry had the highest rate of output growth--averaging a buoyant 8.3% per annum. By 1966, Japanese textiles production had doubled. The Canadian and Australian industries had healthy output growth as well, in the neighborhood of five percent per annum. Moderate rates of growth were recorded in the other countries.

During 1966-76, the U.K. textile industry once again was an exceptional case: it was the only one whose output was shrinking, (albeit at a trivial rate), and yet was the only one whose trend had not deteriorated relative to that in the first period. The second period saw a reduced pace of growth in textiles production in each of the other seven countries. Growth was slow in the French, Swedish and Australian industries, and was in the range of 2-4% per annum in the others.

Textiles output had modest rates of growth during 1976-86 in Canada, the U.S. and Australia. However, production of textiles declined in a majority of the countries--at moderate rates in Sweden, France and the U.K., and slowly in West Germany and Japan. These declines were a break with previous experience. In each of the two previous periods, textiles production had shrunk only in the U.K.

Looking at the three periods together, one sees that textiles output trends deteriorated period by period in each country, with the exceptions of Australia and the U.K. This pattern is strongest in the case of Japan.

(c) Employment

The overall picture for textiles employment during the span of 1956 to 1986 was one of decline. Twenty of the 24 average annual rates of change recorded in Table H2 are negative. Indeed, only the first period, 1956-66, has any positive figures. The rate of employment decline accelerated period-by-period in France, Sweden and the U.K. Similarly, the rates of change worsened each period in the Australian, Canadian and American textiles industries.

For the eight nations as a whole, textiles employment in 1966 was virtually identical to the 1956 level. Slow growth was posted in Australia, the U.S. and Canada, compared with slow declines in France and the U.K. As well, employment in the Swedish and West German industries shrank at modest average annual rates.

During 1966-76, textiles employment drifted downwards in Canada and the U.S. Meanwhile, the industry's workforce was shrinking in the range of 3-5% per annum in each of the other countries. The United Kingdom had the most rapid decline: averaging 4.7% per annum, for a total drop of 38% in this period.

Textiles employment shrank even more rapidly in the U.K during 1976-84. The average annual decline of 5.4% in Sweden was notable as well. For each of the other countries, the decrease was in the range of 2-4% per annum.

(d) Labour Productivity

A glance at Table H3 shows that with the exception of a minute deterioration in the U.K. over 1956-66, labour productivity in the textiles industry grew significantly in each country in each of the three periods.

During the first period, labour productivity improved at moderate rates in Australia and the U.S. Japan posted the fastest average annual growth: 7.0% Average rates of growth were in the range of 4-5% per annum in the other countries.

The second period, 1966-76, had many similarities to the first. The Australian and American textiles industries again had moderate rates of labour productivity improvement. West Germany's growth rate of 6.9% per annum nudged Japan from top spot in the growth standings. The other countries had average annual growth rates in the range of 4-5%.

In every country except Australia and the United Kingdom, 1976-84 saw a slower pace of productivity growth for textiles than in the second period. Indeed, labour productivity growth rates during the third period were modest in all except those two countries.

A common pattern emerges when one considers the above sections on textiles production and employment. Increases in labour productivity have typically arisen (in the first instance) from textiles output remaining the same or increasing when employment has fallen. This would be consistent with a combination of (a) on-going programmes of labour-displacing automation in the industry, (b) improvements in machinery and production processes, and (c) exit by some firms dampening the effect of automation on that nation's textiles production.

TABLE H1

TEXTILES--AVERAGE ANNUAL % CHANGE IN PRODUCTION
(based on production index)

	1956-66	1966-76	1976-86
Australia	4.90[a]	0.32	1.09
Canada	5.36	4.08	2.35
France	2.62	0.98	-2.25
Japan	8.29	3.43	-0.62
Sweden	2.13	0.88	-2.86
U.K.	-0.75	-0.19	-2.60[b]
U.S.	3.38	3.17	1.45
W. Germany	3.07	2.11	-0.80
Dev'd Mkt Economies[c]	n/a	n/a	0.88[d]
Dev'g Mkt Economies[e]	n/a	n/a	2.72[d]
The world	4.75[a]	3.83	1.08

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[a] 1958-1966. [b] 1978-1986.

[c] N. America, Europe (other than E. Europe and Yugoslavia), Australia, Israel, Japan, New Zealand, and S. Africa.

[d] 1975-1986.

[e] Caribbean, Central and S. America, Africa (other than S. Africa), Asia (other than Israel and Japan), and Yugoslavia.

TABLE H2

TEXTILES--AVERAGE ANNUAL % CHANGE IN EMPLOYMENT

(% change in number of persons employed)

	1956-66	1966-76	1976-84
Australia	1.16	-2.71[a]	-3.53
Canada	0.83	-0.61	-2.82[b]
France	-1.29	-4.15	-4.13
Japan	1.18	-3.18	-2.70[c]
Sweden	-2.24	-3.76	-5.39
U.K.	-0.71	-4.67	-8.48[c]
U.S.	0.86	-0.56	-1.99[c]
W. Germany	-1.77	-4.44	-3.78[d]
The 8 nations as a whole	-0.01	-2.87	n/a
The world	1.17[e]	1.49	-0.73[c]

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[a] There is a minor discontinuity at 1974/1975. [b] 1976-1982.
[c] 1976-1983. [d] Based on persons engaged. [e] 1958-1966.

TABLE H3

TEXTILES--AVERAGE ANNUAL % CHANGE IN LABOUR PRODUCTIVITY

(% change in output per employee)

	1956-66	1966-76	1976-84
Australia	3.15	3.12	4.68
Canada	4.50	4.72	2.11[a]
France	3.96	5.35	2.09
Japan	7.03	6.82	2.33[b]
Sweden	4.47	4.82	1.67
U.K.	-0.04	4.70	5.69[c]
U.S.	2.50	3.75	2.77[b]
W. Germany	4.92	6.86	2.21[d]
The world	3.54	2.31	1.23[c]

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[a] 1976-1982. [b] 1976-1983. [c] 1978-1983.
[d] Based on persons engaged.

(vi) CLOTHING

(a) *Caveats*

Caveats similar to those described in section (v) above for textiles statistics apply to the clothing industry statistics presented here.

(b) Production

As Table J1 shows, clothing production increased in each of the eight countries during 1958-66. Growth was most rapid in the Japanese industry, averaging about 10% per annum. This was a much faster pace than the 4.9% annual increase in American clothing production. The average annual growth rate was in the order of 3-4% in each of the other countries, with the exception of France, where the pace was somewhat slower.

In the period 1966-76, clothing production grew less quickly or actually decreased. Average annual growth was in the range of 1-3% in six of the eight countries. However, production declined slowly in West Germany, and at a 3.7% annual rate in Sweden.

Trends in output continued to deteriorate during 1976-86, except in Australia and the U.K., where growth improved marginally. Nevertheless, growth was slow in both of those countries, as well as in the U.S. Clothing production declined slightly in Canada and Japan, at moderate rates in France and West Germany, and at a brisk 7.7% per annum in Sweden.

Scanning across the three periods, one sees a period-by-period worsening in rates of change of clothing output in each of the countries. Australia and the U.K. are minor exceptions to this pattern in the final period.

(c) Employment

Table J2 indicates that Japan was the only one of the eight countries where employment grew strongly in the clothing industry during 1958-66. Increasing at an average rate of 5.8% per annum, the Japanese industry's employment was 57% higher by the period's end. Employment expanded at a respectable 3.3% annual rate in West Germany, but grew at less than 2% per annum in Canada, the U.S., Australia, and the U.K. The Swedish clothing industry's employment posted a modest decline. For the eight countries as a whole (not including France), employment increased at a 2.0% annual rate.

During 1966-76, employment trends were less favourable in each country. Employment growth in the Japanese clothing industry was still vigorous, averaging 5.3% per annum. The increase in the Canadian industry was minuscule, however. In each of the other six countries, employment declined--slowly in the U.S. and France; in the range of 2-4% per annum in Australia, the U.K. and West Germany; and by 6.5% annually in Sweden. For the eight countries as a whole, employment shrank at an average annual rate of 0.8%.

In the period 1976-84, employment trends in the clothing industry were worse than in the previous period. Employment decreased in each of the eight countries, with the exception of a slight increase in Japan. The decline was slow in the U.S.; in the order of 2-3% per annum in Canada, Australia and France; more than 5% annually in the U.K. and West Germany; and a brisk 8.2% per annum in Sweden.

When looking at the three periods, a clear pattern emerges: in each country's clothing industry, employment trends deteriorated period-by-period. Indeed, employment levels actually declined in the latter two periods in most of the countries under study.

(d) Labour Productivity

During 1958-66, labour productivity in the clothing industry improved in each of the countries, as Table J3 shows. The rate of improvement was around 5% annually in Japan and Sweden. In the former case, the improvement was due (in the first instance) to exceptional growth in output; whereas in Sweden, the improvement seems to be attributable to a decline in employment. Annual labour productivity growth was in the range of 2-3% in the U.S., Australia, the U.K. and Canada, while the rate of improvement in the West German industry was slow.

In the period 1966-76, the pace of improvement in labour productivity accelerated markedly in the U.K., Australia, and West Germany. However, the pace slowed significantly in Sweden. Also, the Japanese industry changed from a position of leadership in labour productivity growth (in 1958-66) to stand out as the only country with a decline (2.7% per annum) in absolute labour productivity during 1966-76. British and Australian growth in labour productivity was in the range of 4-5% per annum; while the corresponding rate was in the order of 2-3% in each of the other countries, except Japan.

Labour productivity trends deteriorated during 1976-84 in each country except Australia and the U.K. Those two countries continued to enjoy brisk rates of productivity growth in their respective clothing industries--averaging 5-6% per annum. Growth was moderate in West Germany, but slow in France and the U.S. Meanwhile, labour productivity levels declined slowly in Japan, Sweden and Canada.

Australia and the U.K. are, somewhat surprisingly, the only countries where the pace of labour productivity growth in the clothing industry quickened period-by-period. The Japanese industry's record is also surprising--but the surprise is an unhappy one. Japan was the only country in the second period, and one of only three countries in the third period, where absolute labour productivity declined in the clothing industry.

TABLE J1

CLOTHING--AVERAGE ANNUAL % CHANGE IN PRODUCTION
(based on production index)

	1958-66	1966-76	1976-86
Australia	4.08	1.66	1.71[a]
Canada	4.11	2.72	-0.10
France[b]	2.08	0.98	-2.25
Japan	10.64[c]	2.46	-0.25[d]
Sweden	3.18	-3.72	-7.71
U.K.	3.49	1.16	1.17
U.S.	4.89	2.23	0.69
W. Germany	3.76	-0.52	-2.72

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[a] 1976-1985.
[b] Reflecting textiles production as well.
[c] 1958-1965; reflects textiles production as well.
[d] 1976-1984.

TABLE J2

CLOTHING--AVERAGE ANNUAL % CHANGE IN EMPLOYMENT

(% change in number of persons employed)

	1958-66	1966-76	1976-84
Australia	1.27	-2.27	-2.86
Canada	1.74	0.20	-1.86[a]
France	n/a	-1.37	-3.21
Japan	5.84	5.26	0.23[b]
Sweden	-1.50	-6.53	-8.20
U.K.	0.77	-3.12	-5.22[b]
U.S.	1.65	-0.71	-1.07[b]
W. Germany	3.27	-3.75	-5.47[c]
The 8 nations as a whole	2.03[d]	-0.84	n/a

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[a] 1976-1982.

[b] 1976-1983.

[c] Based on persons engaged.

[d] Not including France.

TABLE J3

CLOTHING--AVERAGE ANNUAL % CHANGE IN LABOUR PRODUCTIVITY

(% change in output per employee)

	1958-66	1966-76	1976-84
Australia	2.76	4.03	5.48
Canada	2.34	2.52	-0.96[a]
France	n/a	2.38	1.13
Japan	5.06	-2.66	-0.51[b]
Sweden	4.74	3.01	-0.65
U.K.	2.69	4.58	5.82[c]
U.S.	3.19	2.96	0.03[b]
W. Germany	0.47	3.35	2.37[d]

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[a] 1976-1982. [b] 1976-1983. [c] 1978-1983.

[d] Based on persons engaged.

(vii) FOOTWEAR

(a) *Caveats*

Footwear is obviously not a homogeneous commodity. Gucci loafers are not the same as vinyl sandals. Finding a common denominator for measuring production is therefore problematic. The value of production would be useful for short-term comparisons involving a single country. However, long-term international comparisons would be of dubious utility because of factors such as currency fluctuations and changes in the cost of inputs.

A measurement based on physical quantity would seem better suited to such comparisons. Counts of the number of pairs produced may appear to be a somewhat primitive measure, especially in light of footwear's heterogeneity. Yet this measure is the only (relatively) pure one available for the French industry. Also, statistics on French footwear production have been marred by some surprising inconsistencies.[1] Efforts have been made to compensate for these when calculating the statistics presented here for France in Tables K2 and K3, but the results of these efforts likely fall short of complete accuracy.

It was somewhat easier to compile a consistent time series for footwear output in each of the other countries. At the time of writing, indices of footwear production up to 1983 are available from the U.N., and (for some countries) after 1983 from the OECD. However, composite indices such as these are themselves estimates. Additional inaccuracies have been introduced here when adjusting the published index numbers so as to standardize on a common base year. It should be noted that the index numbers for American footwear are available from an alternate, highly reputable source [U.S. Bureau of Labor Statistics (1986b)], and do not precisely match those used here as the basis for calculations.

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[1] The fault primarily lies not with the French government, but rather with the Conseil National du Cuir, which was the source of French footwear statistics until 1968. The Conseil's first series of figures, covering 1959 to 1965, was partially superseded by a somewhat more accurate series that covered 1962 to 1968. However, the second series was no great improvement, as shown by the official restatement of output for 1965 to 1968, made by the Ministere du Développement Industriel et Scientifique in 1970. For example, the 1967 figure of 150.0 million pairs was restated as 203.7 million pairs--a difference of 35.8%. Substantial revisions are common even for the statistics of recent years.

(b) Production

As Table K1 indicates, Japanese footwear production grew dramatically over 1958-66: the average annual increase of 16.4%. more than tripled output by the end of this period. Moderate growth was posted in France, Canada, West Germany and the U.K., while growth was very slow in the U.S. Swedish footwear production had a negligible rate of decline, and shrinkage was modest in Australia as well.

During 1966-76, only the Japanese and French industries saw output expand--at a healthy average annual rate of 6.3% in the former, and a sluggish 0.9% in the latter. Footwear output declined slowly in the U.K. and Australia, and at a moderate pace in each of the other countries, with West Germany's shrinkage of 4.0% per annum being the fastest.

Decline was also widespread in the period 1976-86. The Australian industry was the major exception to this: its output grew at a significant 3.8% per annum, compared with a slow shrinkage in the previous period. Canada and Japan had very slow average rates of increase in footwear production, with Japanese output peaking slightly in 1979. Japan turned out to be the only one of the eight nations to improve its level of footwear output in each of the three periods. Over 1976-86, the French industry's slow rate of decline was outpaced by moderate shrinkage in West Germany and the U.K., and by substantial shrinkage in the U.S. and Sweden. In 1986, Swedish footwear production was only half that of 1976. During this period, the Swedish industry's decline slowed markedly in 1979 and 1980, then resumed a rapid pace until the nadir of production was reached in 1984. Output recovered strongly in 1985, and managed to maintain that level in 1986. In contrast, American footwear production declined sharply in both 1985 and 1986.

(c) Employment

During the period 1958-66, employment in footwear manufacturing tended to be fairly stagnant, as Table K2 indicates. Slow average annual rates of increase were posted in Canada, Japan, Australia, the U.S. and the U.K., and there was slow shrinkage in West Germany. The greatest change occurred in the Swedish industry, where employment declined by a moderate 3.3% per annum.

Over 1966-76, footwear industry employment increased only in Japan, but even this was at an extremely gradual pace. The U.S., the U.K. and Canada saw moderate average annual shrinkage. However, industry employment shrank at a substantial rate in Sweden, Australia and West Germany. By 1976, footwear employment in each of these three countries was only about half that of 1966.

The period 1976-84 again saw widespread employment shrinkage. The Australian industry was the sole anomaly in this picture, with its slow employment growth--in marked contrast to its fairly rapid shrinkage in the previous decade. The employment decline in Sweden's footwear industry accelerated from the previous period, and now averaged 10.0% per annum. Indeed, 1984 was not the end of this decline: a 21.0% drop was posted in 1985 [calculated from OECD, Dep't of Economics & Statistics (1987b), p. 41], bringing the footwear employment level in Sweden to less than one-fifth of the 1966 level. The significant rate of employment shrinkage during 1976-84 in the U.K. industry outpaced the more moderate declines in the U.S., France and West Germany. Employment reductions in the Canadian footwear industry were minuscule.

Thus, none of the eight nations saw footwear employment rise in each of the three periods. However, employment levels consistently shrank in the West German and Swedish industries--at an accelerating rate in the latter.

(d) Labour Productivity

As Table K3 shows, labour productivity in the footwear industry improved in most of the countries during 1958-66. The Japanese industry enjoyed an extremely rapid rate of improvement--averaging 15.4% per annum. The corresponding rate was 4.0% in West Germany, and in the range of 2-3% in Sweden, the U.K., and Canada. Labour productivity was virtually unchanged in the U.S., and declined by 3.6% per annum in Australia.

The period 1966-76 again saw improvements in most of the countries. The labour productivity trend in the Australian footwear industry was markedly different from that of the previous period. Instead of declining at a significant rate, Australian labour productivity grew at a brisk 6.0% per annum--slightly faster than in Japan. Sweden's annual improvement of

4.6% outpaced the U.S. and West Germany, where labour productivity growth in the footwear industry was in the neighborhood of 2% per annum. The American industry experienced a slight increase, while the Canadian industry had a slight decline.[2]

Labour productivity trends in footwear manufacturing were generally lacklustre in the period 1976-84. Growth in Australia and the U.K. was in the range of 2-3% per annum, as opposed to only 1-2% in Canada and France. The West German industry had a tiny improvement, while labour productivity deteriorated slightly in the U.S. and Sweden. The most rapid decline--2.3% per annum--occurred in the Japanese footwear industry.

Scanning across the three periods, patterns emerge in the labour productivity performance of the Japanese, West German and the British footwear industries. The average annual rate of change improves period-by-period in the former two countries, and worsens period-by-period in the latter country. The relevant trend is strong in Japan, moderate in West Germany, and weak in the U.K.

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[2] A presumably reliable source asserted in 1977 that "productivity in the Canadian footwear industry has been climbing steadily since the 1960s...": Canada, Anti-Dumping Tribunal (1977), p. 2.14. However, that assertion was seemingly belied by statistics presented immediately following it: see *ibid.*, p. 2.14, and Table 2-9, p. 2.15.

TABLE K1

FOOTWEAR--AVERAGE ANNUAL % CHANGE IN PRODUCTION

	1958-66	1966-76	1976-86
Australia	-2.99	-1.09	3.79[a]
Canada	3.32	-2.51	0.60
France	3.98[b]	0.89	-0.80[c]
Japan	16.43	6.34	0.13[a]
Sweden	-0.69	-3.09	-6.70
U.K.	2.32	-1.47	-1.88
U.S.	0.45	-3.47	-5.78
W. Germany	2.89	-4.02	-2.58

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[a] 1976-1984.

[b] 1959-1966.

[c] 1976-1985.

TABLE K2

FOOTWEAR--AVERAGE ANNUAL % CHANGE IN EMPLOYMENT

(% change in number of persons employed)

	1958-66	1966-76	1976-84
Australia	0.58	-6.70	1.09
Canada	1.20	-1.99	-0.42
France	n/a	n/a	-2.71
Japan	0.87	0.65	-0.45[a]
Sweden	-3.29	-7.34	-10.05
U.K.	0.21	-3.54	-5.81[a]
U.S.	0.38	-3.85	-3.85[a]
W. Germany	-1.11	-5.42	-1.95[b]
The 8 nations as a whole[c]	0.06	-3.80	n/a

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[a] 1976-1983.

[b] Based on persons engaged.

[c] Not including France.

TABLE K3

FOOTWEAR--AVERAGE ANNUAL % CHANGE IN LABOUR PRODUCTIVITY
(% change in output per person employed)

	1958-66	1966-76	1976-84
Australia	-3.55	6.01	3.14
Canada	2.10	-0.54	1.41
France	n/a	n/a	1.35
Japan	15.43	5.66	-2.34[a]
Sweden	2.69	4.58	-0.84
U.K.	2.11	2.15	2.67[a]
U.S.	0.07	0.40	-0.25
W. Germany	4.04	1.48	0.51[b]

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[a] 1976-1983.

[b] The 1984 West German data is not strictly comparable with the 1976 data.

(V) CONCLUSION

(i) SOME PRELIMINARIES

Various *caveats* as to the inferences that can be drawn from the data used in this appendix have been extensively discussed above. Given those *caveats*, what robust conclusions, if any, can be drawn from the statistics in this appendix? As will be seen below, the main conclusion is that there often are significant international variations in the adjustment of a given industry--whether adjustment is considered in terms of magnitude, rapidity, or type.

Recall from section (I)(vii) *supra* ("Recognizing an Industry's Decline"), an industry can be said to be in "decline" if it is experiencing a non-cyclical downward trend in sales (proxied here by production). An industry that engages in non-cyclical labour-shedding while in decline may be termed a "contracting" or "shrinking" industry. Conversely, an industry enjoying non-cyclical growth in both production and employment is "expanding". Used in this way, the terms "contraction"/"shrinkage" and "expansion" do not necessarily imply changes in industry capacity, though such changes often are made in a "contracting" or an "expanding" industry.

(ii) EFFICIENT ADJUSTMENT

When can adjustment be said to have been "efficient"? Efficient adjustment has two aspects--dynamic and static. The dynamic feature pertains to the process by which adjustment was achieved. As discussed above (in section (I)(vi)(a) "Types of Structural Adjustment"), there are several ways in which a firm or an industry may adjust, and a complex combination of adjustment methods may well be undertaken simultaneously or in close succession. No particular method or methods of adjustment can be ascribed superiority *a priori*. The optimal adjustment path varies from industry to industry, from country to country, and from firm to firm. Determining the optimal adjustment process in a given case would require virtual omniscience.

Since--from an economy-wide perspective--the main purpose of adjustment is to redeploy resources into their highest-value uses, the rapidity of adjustment may be considered a crude indicator of its dynamic efficiency. The faster that resources are redeployed, the faster are the associated potential gains in efficiency achieved. The rapidity of adjustment is influenced *inter alia* by how quickly adjustment is recognized as necessary; the astuteness of management; and the availability of the required financial, technological, and skilled-labour resources for undertaking structural adjustment [see OECD, DSTI (1987c), pp. 27, 36]. It also seems reasonable to suppose that particular government policies may hasten (or hinder) adjustment.

The comparative-statics dimension of efficient adjustment pertains to the situation of the relevant industry or firm at the "beginning" and the "end" of the process of adjustment. It is, however, naive to think of adjustment as a discrete process. Adjustment is a continuous process with no clear "beginning" or "end". Even if one could determine that an industry or firm has reached a position of long-term viability, or has redeployed assets to what are, at that point in time, their highest-valued uses--and it highly doubtful that such a determination could be made--

adjustment would not be complete. Sometimes measures to enhance competitiveness are undertaken not in response to immediate competitive threats by foreign (or domestic) firms, but rather to pre-empt possible future threats. For example, a Japanese firm which, world-wide, is the most competitive in its industry, may nevertheless seek to constantly improve its productivity so as to ensure that it will maintain its relative advantage. Thus designation of the "beginning" and "end" of a period of adjustment is arbitrary. When the efficacy of a particular government programme is being evaluated, certain dates may suggest themselves as relevant. Because of the wide scope of this appendix, the choice of beginning and ending dates has necessarily been arbitrary.

The key concern from the comparative-statics viewpoint is competitiveness, vis-a-vis both substitute products and international competitors (and domestic competitors, if analyzing at the level of the firm). Where the product in question is a commodity with standardized characteristics, such as steel, then price is normally the main dimension of competitiveness. In the case of a heterogeneous product such as automobiles or footwear, product design and (perceived) quality may have great importance as competitive dimensions. Of course, competitiveness in a particular industry may have several other significant dimensions as well.

Competitiveness must, by definition, be determined with reference to the various relevant competitors. Thus, for example, improvements in the total factor productivity (TFP) of a given industry in a particular country improve that industry's international competitiveness only to the extent that TFP improvements in other countries have not been as great. International competitiveness should also be considered in the context of the world market, rather than the domestic market. The increased share of a domestic market held by imports may be more than offset by growth in exports of that product from the country in question. (This is especially likely if the product or industry in question is defined too broadly [see section (I)(ix) above on "Industry Heterogeneity"].) Trade liberalization since the founding of GATT in 1947 has tended to increase both imports and exports, often in the same industry of a specific country. Bilateral agreements may also increase significantly the volume of trade in a particular industry--as the Canada-U.S. Auto Pact has done, for example. The volumes of the Canadian auto industry's exports to and imports from the U.S. have experienced substantial growth under the Auto Pact.

In light of all this, changes in import penetration ratios may be somewhat misleading indicators of changes in international competitiveness. Perhaps a more reliable indicator is obtained by making international comparisons of changes in the output of the industry in question. Note, however, that this yields an ordinal ranking according to *changes* in international competitiveness; it does not rank according to relative levels of competitiveness, nor indicate absolute differentials in competitiveness.

From a comparative-statics perspective, adjustment in a particular industry during a specified period can be considered "efficient" if, by the period's end, that industry's international competitiveness has improved significantly. A more rigorous criterion for efficiency would consider the industry's long-term viability. Meaningful application of the latter criterion would require formidable amounts of data, and so its use is precluded here. As well, even the simplest criterion for judging the efficiency of adjustment from a dynamic perspective--actual versus potential rapidity of the adjustment--is extremely difficult to gauge.

(iii) JAPANESE LEADERSHIP IN LABOUR PRODUCTIVITY GROWTH

Among the eight countries, Japan has frequently had the highest growth rates in labour productivity. In most of these cases, Japan's leadership in labour-productivity growth arose not from labour-shedding, but rather from production increasing more quickly than employment. This holds true for the manufacturing sector as a whole in each period, 1956-66, 1966-76, and 1976-84 [see Tables C4 and C5, *supra*], and for the following industries: steel, 1958-66 [see Tables E1, E2 & E3, *supra*]; merchant shipbuilding, 1958-66 (also second-fastest labour-productivity growth, 1966-76) [see Tables F1, F2 & F3, *supra*]; passenger automobiles, 1958-66, 1966-76, 1976-84 [see Tables G1, G2 & G3, *supra*]; textiles, 1958-66 [see Tables H1, H2 & H3, *supra*]; clothing, 1958-66 [see Tables J1, J2 & J3, *supra*]; and footwear, 1958-66, 1966-76 [see Tables K1, K2 & K3, *supra*].

However, in some cases, Japanese leadership in improving labour productivity was associated with employment levels falling while production was rising within the industry: coal mining, 1958-66 [see Tables D1, D2 & D3, *supra*]; steel, 1966-76; and textiles, 1966-76. In a few instances where a Japanese industry had the best labour-productivity performance, both output and employment were falling, but the labour-shedding was more rapid than the drop in production: merchant shipbuilding 1976-84 (slowest deterioration in labour productivity); textiles, 1966-76 (virtually tied for fastest growth in labour productivity).

It is interesting to note that among the coal-mining industries in the eight countries, the Japanese industry was the most rapid labour-shedder during 1966-76, and was the second-most rapid during 1958-66 and 1976-84. Also, during 1976-84, the Japanese shipbuilding industry experienced the mildest decline in output among the eight nations, yet only the Swedish industry shed labour more quickly. These examples might suggest that Japan is the leader in labour-shedding as well as in labour-productivity growth. However, as discussed below, Sweden has the stronger claim to leadership in labour-shedding.

(iv) SWEDISH LEADERSHIP IN LABOUR-SHEDDING

Sweden seems to be particularly adept at shedding labour in declining industries. Sweden's clothing industry, for example, was the only one in the eight nations where employment declined during 1958-66, and it also led in labour-shedding during 1966-76 and 1976-84 [see Table H2, *supra*]. The same can be said of Sweden's clothing industry [see Table J2, *supra*]. Similarly, Sweden was only one of two nations (among the eight) where employment in the footwear industry declined during 1958-66; and the most dramatic declines in footwear employment during 1966-76 and 1976-84 were in Sweden [see Table K2, *supra*]. Of the shipbuilding industries in the eight countries, in the period 1976-84, Sweden's had the most rapid drop in employment [see Table F2, *supra*]. Again, labour-shedding in coal mining during 1956-66 was fastest in Sweden [see Table D1, *supra*].

Yet, employment increases in the automobile industry during 1966-76 were fastest in Sweden, and the Swedish car industry was among the minority that added workers during 1976-84 [see Table G2, *supra*]. Swedish auto production was rising during these two periods.

(v) INDUSTRY SUMMARIES

(a) Coal Mining

In the coal-mining industry, contraction was the norm, but the relative magnitude of contraction in the industry varied significantly from country to country and from period to period. Both production and employment declined during each period, 1956-66, 1966-76 and 1976-84 in France, the U.K. and West Germany, and during the latter two periods in Japan [see Tables D1 and D2, *supra*]. (However, the fall in output was less than 1.0% per annum in France during the first period and in West Germany during the third.) Indeed, the only employment increases shown in Table D2, *supra,* were in Australia, 1966-76 and 1976-84, Canada 1976-84, and the U.S. 1966-76. Production of hard coal grew in each of these three nations in each of the three periods, with the exception of Canada 1956-66. However, production of hard coal declined in France, the U.K., Sweden and West Germany in each period. It also fell in Japan during the latter two periods. The simultaneous declines in production and employment in the four European countries and Japan are consistent with mine closings, particularly in Sweden. Since coal production generally was increasing in Australia and Canada, the fact that labour productivity improved substantially in the coal mines of both those countries suggests that a significant component of labour productivity growth in France, the U.K., West Germany and Japan might have arisen from higher productivity at the mines which continued to operate.

During 1956-66, the coal-mining industry contracted in Canada, France, Sweden, the U.K. and West Germany. The Swedish industry underwent an especially severe contraction, as coal production plummeted by

86.4% and employment fell 66.7%. The second-greatest contraction--in Canada--saw output and employment drop by 26.0% and 40.0%, respectively. The mildest contraction was in the French industry: coal production decreased 8.7% while the number of employees dropped by 37.2%. Of the five countries, France also enjoyed the strongest improvement in labour productivity, increasing this measure by 45.3%, compared with a 59.2% decrease in the Swedish industry [see Table D3, *supra*].

Labour-shedding also occurred in the Japanese, Australian, and American coal-mining industries during this period, though production rose in the latter two. Japan was the leader in reducing employment levels in coal mining: there the number of workers fell by about 60% during 1957-66, while output declined by 0.7%; meaning that labour productivity grew by 146.8%. Coal production was also virtually unchanged in the American industry during 1956-66, yet employment decreased by 45.0%. By virtue of a 147.1% improvement in labour productivity, the Australian industry was able to shed 34.6% of its employees, despite a production increase of 61.7%.

In the period 1966-76, the coal-mining industry was unequivocally expanding in Australia and the United States. Production and employment grew by 114.3% and 52.9%, respectively, in the Australian industry. The corresponding figures for 1966-77 in the American industry were 21.4% and 22.6%. Although employment levels in the Canadian were stagnant, coal output (as well as labour productivity) rose by 146.2%.

The coal-mining industry contracted in each of the other countries during 1966-76. Indeed, coal mining apparently ceased in Sweden. Employment in the Japanese industry dropped 76% from the 1966 level by 1976, whereas production declined 64.2%. Contraction was also sharp in the French industry, as the corresponding decreases were 50.9% and 53.7%, respectively.

In the period 1976-84, only the Australian and Canadian industries expanded. Output and the number of employees rose, respectively, by 83.6% and 30.8% in Australia, and by 54.2% and 32.2% in Canada. However, the industry contracted in France, Japan, the U.K. and West Germany. The French contraction--with production and employment decreasing by 21.6% and 32.1%, respectively--was the most severe during this period. In contrast, the corresponding decreases in the West German industry were 11.5% and 11.8%.

(b) Steel

During 1958-66, the steel industry expanded in each of the eight countries. Labour productivity also improved in each (except for a 2.6% deterioration in the West German industry), growing by 33.1% in the eight nations as a whole (not including France). Japanese steel output soared by 294.3%, while the number of employees rose by 50.5%. The weakest expansion was in the U.K. industry, where steel production and employment increased by 20.5% and 8.1%, respectively. Labour productivity grew by 162.1% in the Japanese industry, compared to 12.8% in Britain.

The period 1966-76 saw expansion in the French steel industry, and, to a lesser extent, in the Canadian and Australian industries. French steel output and employment rose by 18.6% and 57.2%, respectively. Consequently, the French industry was the only one where labour productivity declined (by 24.6%) in this period. Steel production in Canada grew by 44.5%, though the number of employees increased by only 6.3%. The corresponding figures in the Australian industry were 40.5% and zero percent, so labour productivity improved by 40.5%.

The rise in Australian labour productivity during 1966-76 was met by comparable improvements in the Canadian and West German industries, but was a distant second to the 125.7% growth in labour productivity enjoyed by the Japanese industry. In Japan, West Germany and Sweden, steel production increased (by 124.9%, 20.1% and 8.1%, respectively) while employment levels diminished (by 0.4%, 14.2% and 2.9%, respectively). The Swedish industry's 11.2% improvement in labour productivity was the smallest increase among the seven countries where output per employee grew in this period.

Both the British and the American steel industries contracted during 1966-76. Steel output and employment declined, respectively, by 4.6% and 16.8% in the U.S. Although directly comparable figures are not readily available for the British industry, it appears that the contraction there was appreciably more severe.

With the exception of Canada, the steel industry contracted in each of the eight countries during 1976-84. Canadian steel output rose by 11.9%, though the number of employees appears to have declined slightly. In contrast, the U.K. industry engaged in a massive shedding of labour--employment fell by 50.4% in the period 1976-83, representing a loss of 193,000 workers--while output declined by 28.3%. The resulting 44.5% improvement in labour productivity (1976-83) was outpaced only by the West German industry, where labour productivity increased by 83.9% (1976-84) after employment decreased by 48.7%. Labour-shedding was also vigorously undertaken in the American industry in this period.

(c) Merchant Shipbuilding

During 1958-66, the Canadian and Japanese shipbuilding industries were the only ones that were unequivocally expanding. Canadian production soared 139.1% while employment rose 16.7%. The corresponding increases in the Japanese industry were 223.4% and 2.8%, respectively. Significant strides were made to improve labour productivity: growth of 104.5% in Canada and 214.7% in Japan occurred during this period.

Labour productivity also improved significantly in Sweden and France, rising by 74.4% (1958-66) and 64.8% (1957-67), respectively. In both countries output rose while employment fell. Production of merchant ships increased by 52.7% and employment declined by 12.4% in Sweden during 1958-66, while the corresponding figures in France were 29.2% and 21.6%, respectively, during 1957-67. The experience of the U.S. industry was the unhappy reverse of this: output was 77.2% lower in 1958 than in 1966, yet employment was 15.2% higher, resulting in a 80.2% drop in labour productivity. The U.S. industry was the only one where labour productivity significantly worsened in this period, though the British and Australian industries also saw some marginal deterioration.

The latter two industries plus the West German industry contracted during 1958-66. Output and employment fell, respectively, by 17.1% and 27.5% in West Germany, by 22.7% and 22.2% in the U.K., and by only 7.1% and 0.9% in Australia. Labour productivity deteriorated slightly in the U.K. (0.7%) and Australia (1.0%), but improved by 14.3% in the West German industry.

The period 1966-76 witnessed expansion in the shipbuilding industries of Australia, France, Japan, Sweden and the United States. Expansion was particularly vigorous in the U.S., where production and employment rose, respectively, by 539.6% and 24.7%, and in France, where the corresponding increases during 1967-76 were 116.1% and 48.6%. The slowest expansion was in Australia--though output and employment increases of 76.9% and 19.9%, respectively, are far from negligible. In these five countries, labour productivity improved tremendously in the U.S. (up 412.8%), while the Swedish industry's 66.0% improvement was fairly representative. The period's smallest increase in labour productivity (47.5%) was in Australia.

Production also grew during 1966-76 in Canada, West Germany and the U.K. (by 54.9%, 51.3%, and 23.7%, respectively). However, employment in the merchant shipbuilding industry fell in these three countries (by 9.6% in Canada, 8.7% in West Germany, and by a lesser degree in the U.K.). Productivity improvements were comparable with those experienced in the Swedish industry.

In the period 1976-84, the shipbuilding industry contracted sharply in each of the eight nations, and labour productivity fell in each as well. The most extreme contraction was in Australia, where construction of large ships ceased in 1978. In the Swedish industry, output plummeted 92.5% and employment fell 58.9%. Thus Sweden's labour-shedding, while drastic, was not drastic enough: labour productivity worsened by 81.8%. The Japanese industry experienced the mildest contraction: during 1976-83, production and employment decreased by 51.0% and 44.7%, respectively, (though 1984 and 1985 output were significantly higher than the 1983 level). Output fell by 80 to 90% in each of the other countries during 1976-84, with the exception of a somewhat less extreme reduction in the West German industry.

Canada and the U.S. were relatively slow in shedding labour. Consequently, labour productivity in the American industry declined by 80.3% during 1976-83. In contrast, Japanese labour productivity decreased during 1976-83 by a relatively modest 11.3%.

It is interesting to note that in the countries with the greatest deterioration in labour productivity--Canada, France, Sweden and the U.S.--production continued to decline sharply during 1984-86 in all but the American industry. The anomalous increase in the U.S. might well be due to provisions in the *Jones Act.*

Significant international differences in the magnitude and temporal pattern of contraction are indicated by Table M1, below. The French and British merchant shipbuilding industries seem to have delayed their capacity reductions, whereas in other countries, such as Sweden and West Germany, adjustment seems to have been accelerated rather than put off. Also note that proportionate adjustments in a given period often differ greatly by country.

TABLE M1

REDUCTIONS IN AVAILABLE MERCHANT SHIPBUILDING CAPACITY
(Total % Decrease in Period)

	1976-80	1980-85	1976-85
France	39.2	60.0	75.7
Japan	34.7	n/a	n/a
Sweden	63.6	45.1	80.0
U.K.	15.5	54.9	61.9
W. Germany	40.0	11.1	46.7

Figures relate to new merchant ships of 100 gross tons or more, and do not include specialized shipyards (offshore, naval, repair, etc.).

(d) Passenger Automobiles

The auto industry expanded in each of the eight countries during 1958-66. The magnitude of expansion varied considerably from country to country, however. Automobile production and employment jumped by 1,634.6% and by 140.3%, respectively, in Japan, and by 116.6% and 49.7% in West Germany [see Tables G1 and G2, *supra*]. Though the cyclicity of the U.S. and Canadian industries reduces the meaningfulness of comparisons between arbitrarily chosen times, it is clear that the corresponding increases in those countries were much more modest than in Japan or West Germany.

Labour productivity also improved substantially in most of the eight nations in the period 1958-66 [see Table G3, *supra*]. Growth in labour productivity in the Japanese auto industry was a phenomenal 622.4%. Australia's increase of 79.3% was the next greatest, while labour productivity in the British auto industry grew a scant 2.0%.

Expansion continued during 1966-76 in the Australian, Canadian, French, Japanese, Swedish and West German auto industries. Production surged 472.8% and employment grew by 31.3% in Japan; while in the Swedish auto industry, output and employment increased by 95.8% and 101.5%, respectively. The expansion was comparatively feeble in Australia: auto production rose 25.7% while the number of employees grew 2.5%.

Although employment increased slightly in the U.K. and the U.S., auto production in 1976 was somewhat lower in those two countries than in 1966. (The American industry, as illustrated in Table G, *supra*, experienced profound cyclical variations during this period.) Hence labour productivity was 11.7% lower in the British auto industry, and 10.2% lower in the U.S., by the period's end. In contrast, labour productivity grew in each of the other countries during 1966-76, with the exception of Sweden's modest decline. The Japanese industry's improvement was not quite as spectacular as in the previous period, though its 336.2% increase in labour productivity is nevertheless remarkable. The next best showing was in France, where output per worker climbed 52.9% during the period, compared with a trifling 3.3% in the West German auto industry. In the eight nations as a whole, labour productivity in the industry grew by 21.5%. Relative to that standard, the Australian and Canadian auto industries improved only marginally.

During 1976-84, the auto industry contracted in Australia, France and the U.K., and, to a lesser extent, in Canada. French production and employment fell by 14.1% and by 25.4%, respectively, while the corresponding declines in the Australian industry were 7.6% and 22.5%. A simple comparison of 1976 and 1984 indicates that the U.S. industry contracted as well, though this characterization tends to mask the fact that U.S. auto production was 50.2% higher in 1984 than in 1982.

The Swedish industry (perversely) added 12.1% more workers during 1976-84, while output fell by 8.5%. Not surprisingly, labour productivity declined by 15.8%. Production (and labour productivity) were sharply higher in 1985, however.

The period 1976-84 saw expansion in the auto industry only in Japan and West Germany. Japanese auto production was 42.2% higher in 1983 than in 1976, and employment was up 13.9%. Labour productivity was thus 24.9% better in 1983 than in 1976. In contrast, labour productivity deteriorated in the West German industry by 15.2% during 1976-84, as production and employment rose by 6.6% and 26.1%, respectively.

(e) Textiles

Labour-shedding seems to have been a widespread feature of the adjustment experiences of the textiles industries. Employment levels declined in each country and each period, with the exception of small increases in Australia, Canada, Japan and the U.S. during 1956-66. The magnitude of the declines varied significantly. During 1956-66, Sweden had the fastest pace of employment reduction, shedding 20.3% of its textile workers by the end of this period, compared with a 6.9% drop in the U.K. However, the U.K. industry (closely followed by the West German and French industries) was the quickest labour-shedder during 1966-76, losing 62.0% of its employees, compared to an employment drop of only 5.5% in the U.S. and 5.9% in Canada. American textiles producers were again the slowest to cut jobs during 1976-83, and British producers the fastest, reducing their employment in this period by 14.9% and 50.8%, respectively.

The various declines in employment do not appear to have been associated with contraction during 1956-66 or 1966-76, except perhaps in the U.K., where output gradually drifted lower. In the period 1976-84, contraction was plainly evident in the British textiles industry, as well as in France and Sweden. The contraction of the Japanese and West German industries during that period was extremely modest, and might not have been associated with a reduction in capacity.

Labour productivity grew appreciably in each country in each period, with the exception of a very small decline in the U.K. over 1956-66. This held true both for the textiles industries undergoing contraction and for those where output was increasing. With textiles output generally on the rise in the first two periods, it seems that modernization and other positive measures to raise productivity were responsible for most of the observable improvements in labour productivity. Japan enjoyed an outstanding rate of labour productivity growth during 1956-66, and again in 1966-76 (though the West German industry slightly exceeded the Japanese rate of improvement in the latter period). American performance was relatively mediocre in the first two periods, but in the latter, the Australian industry's rate of increase in labour productivity was even less notable. However, during 1976-84, Australia's textile industry improved its labour productivity at a pace second only to that of the West German industry.

The fact that in France, Japan and Sweden, labour productivity growth was slower in the third period that in the second, when viewed in the context of contraction, is suggestive of a running-down of some capital equipment as well as a slowing in the rate of modernization in those countries.

(f) Clothing

The clothing industry expanded both production and employment in each of the eight countries during 1958-66, with the exception of Sweden (where output increased significantly while the number of clothing workers declined by 11.3%) [see Tables J1 and J2, *supra*]. The expansion was exceptionally vigorous in Japan, while employment growth was slow in the U.K. in this period. Labour productivity grew in each country, with rapid improvements in Japan and Sweden, but decidedly sluggish growth in the

West German industry [see Table J3, *supra*].

During 1966-76, the clothing industry contracted in only two of the eight nations, as production and employment fell by 31.6% and 49.1% in Sweden, and by a 5.1% and 31.8% in West Germany, respectively.

Labour-shedding also occurred in other countries during 1966-76, with significant drops in the number of clothing workers in the U.K. and Australia, and relatively modest declines in France and the U.S. These changes do not seem to have been associated with capacity reduction, as clothing output in those four countries grew (led by a 24.7% increase in the U.S.) over the period. Meanwhile, the clothing industry was expanding is Canada and Japan--clothing production rose by 30.8% in Canada and by almost as much in Japan, while the number of clothing workers increased slightly in Canada and by 67.0% in Japan. The Japanese industry's disproportionate employment growth made Japan the only country where labour productivity worsened during 1966-76. In contrast, labour productivity improved by 56.5% in the U.K. and 48.5% in Australia.

The period 1976-84 saw clothing output decline in most of the countries. However, the decreases were very small in Japan and Canada, and there were modest increases in Australia, the U.K. and the U.S. The industry shed labour in each of the latter three nations, resulting in significant increases in labour productivity in two of them: the Australian improvement of 53.2% was comparable to that experienced in Britain, but labour productivity was stagnant in the American industry. In contrast, labour productivity actually deteriorated slightly in Canada, Sweden and Japan.

Labour-shedding also occurred in Canada, France, Sweden and West

Germany during 1976-84. The industry underwent severe contraction in Sweden, with production falling 52.1% and employment falling 49.5% during the period. The West German and French industries also contracted, with output and the number of workers engaged in the manufacture of clothing declining by 23.1% and 36.2%, respectively, in West Germany, while the French industry experienced somewhat smaller decreases.

(g) Footwear

During 1958-66, the footwear industry expanded in Canada, Japan and the U.K., and, to a lesser extent, in the United States. The Japanese industry's production and employment grew 233.1% and 7.2%, respectively, while the corresponding figures in Canada were 29.9% and 10.0%. The latter number is the result of the fastest pace of employment growth in the footwear industry in any of the eight countries during any of the three periods (1958-66, 1966-76, and 1976-84). In the American industry, however, output was up by only 3.7% in the first period, and the number of workers grew by a mere 3.1%. The U.S. labour productivity rise of 0.6% was dwarfed by the 215.2% increase in the Japanese industry.

Footwear production was also higher in West Germany in 1966 than in 1958 (by 25.6%), though employment in the industry had dropped by 8.5%. The reverse was true in Australia--production had declined by 21.6%, while employment had actually increased by 4.7%. Consequently, by the period's end, labour productivity was up 37.3% in the West German industry but down 25.1% in Australia. Australia is the only country where output per worker declined during the first period.

Contraction was the norm in the footwear industry during 1966-76 and 1976-84. The Swedish industry was in vanguard of this trend, as it was the only one to contract during 1968-66; its production and employment fell by 5.4% and 23.5%, respectively. The resulting increase in labour productivity was 23.7%--the third best improvement in the period (after Japan and West Germany).

During 1966-76, Japan was the only one of the eight countries where the footwear industry did not contract. In fact, the Japanese industry expanded, with production growing a vigorous 84.9% and employment rising 6.7% by the period's end. The contraction in the other seven countries was led by the Swedish and West German industries. In the former, output decreased by 26.9% and the number of workers fell by 53.3%; while the corresponding figures for the latter were 33.7% and 42.7%, respectively. The mildest contraction was in the Canadian industry, where production shrank by 22.4% and employment by 18.2% over the period. Canada was also unique in the 1966-76 period as being the only nation where labour productivity in the footwear industry decreased, albeit only slightly. Canada's decline of 5.3% suggests a significant deterioration of competitiveness when contrasted with labour productivity increases of 79.3%, 73.4% and 56.5% in the footwear industries of Australia, Japan and Sweden, respectively. A similar inference could be drawn from the American industry's mediocre (4.1%) improvement in labour productivity.

Footwear production grew in three countries during 1976-84: Australia, Canada and Japan. The increase was small in the latter two countries--8.2% in Canada and 1.0% in Japan--and was accompanied by similarly modest declines in employment. However, labour productivity rose during the period by 11.9% in the Canadian industry, whereas it fell by 15.3% in the Japanese industry over 1976-83. Japanese footwear-makers actually had the most rapid deterioration in labour productivity among the eight countries in this period.

During 1976-84, the footwear industry expanded only in Australia: production and employment grew by 34.7% and 9.1%, respectively. The Australian industry also enjoyed the fastest pace of improvement in labour productivity during this period, as output per employee rose by 28.1%.

The footwear industry contracted in each of the other five countries during the 1976-84 period. Both production and employment declined in the Swedish, British, American and West German industries, and, to a lesser extent, in the French industry. Contraction in the Sweden was particularly dramatic: footwear output and employment fell by 49.3% and 57.1%, respectively. The American industry also underwent an impressive degree of contraction, particularly during 1984-86. Production in the U.S. footwear industry was 44.9% less in 1986 than in 1976. In contrast, 1976-84 saw output and employment declines in the French industry of only 10.6% and 19.7%, respectively.

(vi) LAWRENCE AND THE RAPIDITY OF ADJUSTMENT

Lawrence asserts that a comparison of various industrial groupings in Canada, the U.S. and Japan, indicates "a remarkable similarity in the nature and degree of changes, regardless of the differences in policies in each of the countries" [Lawrence (1988), p. 4]. He buttresses this assertion by referring to statistical tables relating to employment data. As discussed in section (I)(vii) *supra* ("Recognizing an Industry's Decline"), employment levels are an unreliable indicator of whether an industry is "declining", or the extent of such "decline". "Decline" is properly characterized by a non-cyclical downward trend in unit sales (as proxied for by unit production).

The first table in Lawrence (1988) [not reproduced here] is based on employment in arbitrarily-defined industrial agglomerations such as "selected high-growth industries". As section (I)(ix) *supra* ("Industry Heterogeneity") has argued, over-inclusive statistical groupings may mask important differences among their constituent elements. There is an additional reason to be cautious about overstating the apparent, international sameness of employment trends for agglomerations of industries. Such data may conceal a significant form of adjustment--the redeployment of resources from one industry to a somewhat similar industry--since both industries may well be lumped together in Lawrence's groupings.

Table M2 (below) is identical to what appears as Table 2 in Lawrence (1988) [p. 50], except that the format of the table has been changed to facilitate international comparisons. This table presents data relating to certain industries that Lawrence has arbitrarily deemed to be "declining", and the problems of excessive agglomeration are not as acute as in Lawrence's first table. The evidence in Table M2 for concurrent adjustment is far from overwhelming. There seem to be only 3 (out of a possible 15) instances where an industry had comparable employment changes in all three countries during a particular period: textiles, 1980-85; shipbuilding, 1970-75; and shipbuilding, 1980-85. (There are a few other instances in Table M2 where employment declined in all three countries, but in each of those other cases, the decline in one country was of a much greater magnitude than in another country.) So, if anything, Table M2 tends to *disprove* the hypothesis that adjustment patterns were similar in all three countries. Indeed, in each of the industries in Table M2, employment levels have tended to adjust sooner in Japan than in the U.S.

Lawrence considers some issues surrounding capacity reduction, yet seems to devote scant attention to another important form of adjustment--improving total factor productivity (as very crudely proxied here by labour productivity). It is true that the average level of productivity should rise in an industry when a firm exits, since that firm was presumably the least efficient. However, the empirical work of Hazeldine *et al.* indicates that "plant closings never contributed a substantial amount...to productivity growth" in Canadian manufacturing industries during 1970-79 [Hazeldine *et al.* (1985), p. 67]. Clearly productivity improvements warrant distinct treatment as a form of adjustment.

Referring back to the tables in this appendix showing average annual rates of change in labour productivity in specific industries--coal mining, Table D3; steel, Table E3; merchant shipbuilding, Table F3; passenger automobiles, Table G3; textiles, Table H3; clothing, Table J3; and footwear, Table K3--one is often struck by marked differences among the eight countries. Even when attention is focused solely on industries that were in decline in a particular period, significant international disparities remain.

TABLE M2

CHANGES IN EMPLOYMENT IN CERTAIN "DECLINING" INDUSTRIES

(total % change in stated period)

		U.S.	Japan	Canada
Manufacturing:	1970-75	-6	-3	+6
	1975-80	+12	-3	+6
	1980-85	-8	+5	-2
Textiles:	1970-75	-11	-21	+2
	1975-80	-1	-17	-7
	1980-85	-18	-9	-14
Iron & Steel:	1970-75	-9	-8	+9
	1975-80	-4	-15	+9
	1980-85	-37	-11	-22
Shipbuilding:	1970-75	+23	+24	+25
	1975-80	+8	-50	+5
	1980-85	-20	-21	-14
Coal Mining:	1970-75	+47	-49	0
	1975-80	+16	-19	+38
	1980-85	-26	-17*	+10

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*For the period 1980-84.

LIST OF DATA SOURCES FOR THE CALCULATIONS USED TO PRODUCE THE TABLES IN THIS APPENDIX

Note: An effort has been made to obtain the most recently published version of each piece of data used in the preparation of the tables in this appendix. This is because various statistics are prone to subsequent revision--sometimes resulting in very substantial changes. Thus a statistic relating to 1966 but published in 1987 is much more reliable than the corresponding figure published in 1967.

When constructing a thirty-year time series, discontinuities are to be expected. Where there is overlap of at least one year, series have been linked. In cases of overlap for more than one year, the penultimate year in the earlier time series (rather than the terminal year) is used in the linkage calculation. The terminal year of a series is suspect because it presumably is subject to significant revision. Hence the most recent year in each time series (e.g. 1986)--and the associated average annual rate of change (e.g. for 1976-1986)--should be treated with some caution.

Abbreviations Used Below in the List of Data Sources

U.N. Monthly Bulletin of Statistics, ([date]), is abbreviated as *Bulletin*, ([date]).

U.N. Statistical Office, *Growth of World of Industry, [year]*, (Vol. I: *General Industrial Statistics*), is abbreviated as *Growth, [year]*.

------, (1963), is abbreviated as *Growth, 1938-61*.

------, (1967), is abbreviated as *Growth, 1953-65*.

------, *Industrial Statistics Yearbook, [year]*, (Vol. I: *General Industrial Statistics*), is abbreviated as *Industrial, [year]*.

------, *U.N. Statistical Yearbook, [year],* is abbreviated as *Stats [year].*

------, *Yearbook of Industrial Statistics, [year],* (Vol. I: *General Industrial Statistics*), is abbreviated as *Yearbook, [year].*

LIST OF DATA SOURCES:

Table A3 [Shipbuilding & Repair Establishments]:

Table A4 [Shift in France from Shipbuilding to Ship Repair]: France, *1978,* p. 199, Table 9.

Table B1 [Real GDP]: *Source Key* [all by OECD, Dep't of Economics and Statistics]: (A) (1984); (B) (1986); (C) (1987e); (D) (1987a).

Australia: 1956-66: (A), p. 34, and (B), p. 28; 1966-76: (B), p. 28, and (C), p. 61; 1976-86: (C), p. 81. Canada: 1956-66: (A), p. 28, and (B), p. 22; 1966-76: (B), p. 22, (C), p. 23, and (D), Table 8.1, p. 78; 1976-86: (C), p. 23, and (D), Table 8.1, p. 78. France: 1956-66: (A), p. 46, and (B), p. 40; 1966-76: (B), p. 40; 1976-86: (B), p. 40, and (C), p. 89. Japan: 1956-66: (A), p. 32, and (B), p. 26; 1966-76: (B), p. 26, and (C), p. 49; 1976-86: (C), p. 49. Sweden: 1956-66: (A), p. 68, and (B), p. 62; 1966-76: (B), p. 62, and (C), p. 129; 1976-86: (C), p. 129. U.K.: 1956-66: (A), p. 74, and (B), p. 68; 1966-76: (B), p. 68, and (C), p. 145; 1976-86: (C), p. 145. U.S.: 1956-66: (A), p. 30, and (B), p. 24; 1966-76: (B), p. 24, (C), p. 35, and (D), Table 8.1, p. 78; 1976-86: (C), p. 35, and (D), Table 8.1, p. 78. W. Germany: 1956-66: (A), p. 48, (with adjustment to include the Saar and W. Berlin), and (B), p. 42; 1966-76:(B), p. 42, and (C), p. 103; 1976-86: (C), p. 103.

Table B2 [Real GDP Per Capita]: 1956-66 (except Australia): OECD, Dep't of Economic and Statistics (1967), p. 14, and (A) ------ (1987d), Table 20, pp. 116-117; Australia 1956-66: *Stats, 1965,* p. 539, and (A), *supra.* All other data: (A), *supra.*

Table B3 [Employment]: 1956-66 (except Australia): OECD, Dep't of Economics and Statistics (1968), pp. 16-17, and (A) ------ (1987c), pp. 24-25; Australia 1954-66: Australia, 1960, p. 451, and (A), *supra.* All other data: (A), *supra.*

Table C1 [Manufacturing Production]: 1958-66 (except Mkt Economies and World): *Growth, 1968,* pp. 19, 53, 116, 184, 313, 335, 343, 124. 1966-76: *Yearbook, 1974,* pp. 17, 70, 166, 292, 530, 580, 596, 181; and (A) *Yearbook, 1981,* pp. 20, 82, 186, 307, 527, 577, 592, 207. 1976-86: (A), *supra;* and *Bulletin,* (Dec. 1987), pp. 22-28. Mkt Economies: 1975-86: (B) *Bulletin,* (Nov. 1987), pp. 260-261. World: 1958-66: *Growth, 1970,* p. 524; 1966-76: *Ibid.,* and (C) *Yearbook, 1980,* p. 588; 1976-86: (C), *supra,* and (B), *supra,* Special Table A, pp. 256-257.

Table C2 [Manufacturing Employment]: All Except Canada and World: 1958-66: OECD, Dep't of Economics and Statistics (1970), pp. 32, 90, 51, 172, 195, 41, 98, and (A) ------ (1987c), pp. 132-133; 1966-76, 1976-86: (A), *supra*. Canada: 1958-66, 1966-76: Hazeldine *et al.* (1985), p. 1a, and (A), *supra.*; 1976-85: (A), *supra*. World: 1958-66: *Growth, 1970,* p. 524; 1966-76: *Ibid.*, and *Yearbook, 1980,* p. 601; 1976-83: *Industrial, 1984,* p. 631.

Table C3 [Manufacturing Employment as a % of Civilian Employment]: 1958 (except Australia): OECD, Dep't of Economics and Statistics (1970), pp. 29, 89, 48, 169, 192, 41, 95; and, for Canada and W. Germany, (A) ------- (1987c), pp. 70-71, 238-239. 1966, 1976, 1985: (A) pp. 132, 133, 70-71, 222-223, 106-107, 394-395, 450-451, 90-91, 238-239.

Table C4 [Manufacturing Labour Productivity, per gross production]: As indicated above for Tables C1 and C2.

Table C5 [Manufacturing Labour Productivity, per value added]: U.S. Bureau of Labor Statistics (1986a), Table 2 [unpaginated].

Table D1 [Hard Coal Production]: 1956 (and 1957 Japan): *Stats, 1965,* pp. 183-184. 1966: *Ibid., 1970,* pp. 190-191. 1976 (and 1977 U.S.): *ibid., 1979/80,* pp. 196-197; *Bulletin,* (Dec. 1981), p. xii. 1986: *Ibid.*, (Aug. 1987), pp. 32-33; *ibid.*, (Dec. 1987), Special Table A, p. 256.

Table D2 [Coal Mining Employees]: 1956 (and 1957 Japan): *Growth, 1938-61,* Table 3B, p. 31, and Table 2B, p. 28; Table 4B, p. 112, and Table 3B, p. 107; Table 5B, p. 277, and Table 3B, p. 274; Table 4B, p. 461; Table 5B, p. 705, and Table 3B, p. 700; Table 5B, p. 788, and Table 3B, p. 783; Table 4B, p. 812, and Table 3B, p. 809; Table 5A, p. 307, and Table 3B, p. 303, and (Saar) Table 2A, p. 317, and Table 3B, p. 319; (A) *Growth, 1970,* p. 538. 1966 (except U.S.): (A) pp. 17, 62, 162, 257, 443, 491, 175, 538; U.S.: *Growth, 1967,* p. 238. 1976 (and 1977 U.S.): *Yearbook, 1980,* pp. 14, 74, 172, 283, 496, 540, 549, 191, 601. 1984: *Industrial, 1984,* pp. 14, 74, 189, 311, 527, 573, 582, 208, 631.

Table D3 [Coal Mining Labour Productivity]: As noted above for Tables D1 and D2, with 1984 hard coal production from *Bulletin,* (Aug. 1987), pp. 32-33.

Table E1 [Crude Steel Production]: 1956: *Stats, 1965,* p. 306. 1966: *Ibid., 1976,* p. 320. 1976: U.N. Economic Commission for Europe (1986b), p. 10; *Bulletin,* (Dec. 1981), p. xii. 1986: *Ibid.*, (Aug. 1987), pp. 77-78; *ibid.*, (Dec. 1987), Special Table A, p. 256.

Table E2 [Iron & Steel Employment]: 1958 (Australia, Canada, Japan, and U.S.): *Growth, 1967,* pp. 9, 43, 119, and 238; (Sweden, U.K. and W. Germany): *Growth, 1953-65,* pp. 422, 460, and 162; (France): *Growth, 1938-61,* p. 278. 1966: *Growth, 1970,* pp. 17, 63, 162, 258, 443, 491, 502, and 175. 1976: *Yearbook, 1980,* pp. 14, 74, 172, 284, 496, 540, 549, and 191. 1984: *Industrial, 1984,* pp. 14, 74, 189, 311, 528, 573, 582, and 208.

Table E3 [Steel Industry Labour Productivity]: 1958: *Stats, 1967,* p. 300; and as noted above for Table E2. 1966, and 1976: as noted above for Tables E1 and E2. 1984: as noted above for 1986 in Table E1; and as noted above for Table E2.

Table E4 [Absolute Labour Productivity in Steel Production]: Steel Initiative (1985), p. 206.

Figure F [World Shipping Output, 1939-1986] Todd (1985), p. 9, Figure 1:2; 1976-79: Bulletin (Dec. 1981), p. xii; 1980-86: *Bulletin* (Oct. 1987), p. 257, Special Table A, Part B.

Table F1 [Production of Merchant Ships]: 1956: Stats, 1965, p. 317. 1966: *Ibid., 1976,* pp. 333-334. 1976: *Ibid., 1982,* pp. 717-719; and 1976 world from *Bulletin,* (Dec. 1981), p. xii. 1986: *Bulletin,* (Oct. 1987), Part B of Special Table A, p. 257.

Table F2 [Employment in Merchant Shipbuilding & Repair]: All Except France: 1958 (except Sweden, and the U.K.): *Growth, 1967,* pp. 9, 43, 119, 238, 71; (Sweden and the U.K.): *Growth, 1953-65,* Table 13, p. 422, and Table 13, p. 460. 1966 (except W. Germany): *Growth, 1970,* pp. 17, 63, 258, 443, 491, 502; (W. Germany): *Growth, 1969,* p. 154. 1976: *Yearbook, 1980,* pp. 14, 74, 284, 496, 540, 549, 191. 1984 [or the closest year thereto]: *Industrial, 1984,* pp. 14, 74, 189, 528, 573, 582, 208. France: 1957: France, *1959,* p. 152; 1967: *Ibid., 1968,* Table III, p. 288; 1976: *Ibid., 1979,* Table 2, p. 370; 1984: *Ibid., 1986,* p. 362.

Table F3 [Labour Productivity in Merchant Shipbuilding]: As noted above for Tables F1 and F2, with 1958 production from *Stats, 1967,* p. 311; 1957 French production from *ibid., 1965,* p. 317; and 1967 French production from *ibid., 1977,* p. 344.

Table F4 [Value of U.S. Commercial Shipbuilding & Repair Work: U.S. ITC (1985), p. 11.

Table F5 [Value of U.S. Military Shipbuilding & Repair]: Ibid., p. 14.

Table F6 [Shipbuilding & Repair--Net Sales in U.S.]: Ibid., p. viii.

Table F7 [Capacity Utilization in U.S. Shipbuilding & Repair]: Joint: *Ibid.,* p. 15. Shipbldg only: *Ibid.,* p. 16.

Table F8 [Production Employees in U.S. Shipbuilding & Repair]: Ibid., pp. viii, 15.

Figure G ['Carwars'--U.S. and Japanese Passenger Auto Production, 1956-86]: As noted below for Table G1.

Table G1 [Automobile Production]: 1956: *Stats, 1965,* p. 318. 1966: *Ibid., 1976,* pp. 335-336. 1976: *Ibid., 1983/84,* p. 729. [As of 1986, the 1976 U.S. figure was still a provisional estimate.] 1986: *Bulletin,* (Aug. 1987), pp. 85-86. World 1976-85: *Ibid.,* (Dec. 1981), p. xii, and Ibid., (Dec. 1987), Special Table A, p. 256.

Table G2 [Automobile Employment]: France: 1958: France, *1961,* p. 201; 1966: *Ibid., 1969,* p. 77; 1976: *Ibid., 1979,* p. 365; 1984: *Ibid., 1986,* Table K.07-2, p. 584. W.Germany: 1958: Mayer (1983), p. 238. 1966: Federal Republic of Germany, *1967,* p. 226; 1976: *Ibid., 1978,* p. 169; 1984: *Ibid., 1986,* p. 177. All but France and W. Germany: 1958 (except 1958 Sweden and the U.K.): *Growth, 1967,* pp. 9, 43, 119, 238; (Sweden and the U.K.): *Growth, 1953-65,* Table 13, p. 422, and Table 13, p. 460. 1966: *Growth, 1970,* pp. 17, 63, 258, 443, 491, 502. 1976: *Yearbook, 1980,* pp. 14, 74, 284, 496, 540, 549. 1984 [and the closest year thereto]: *Industrial, 1984,* pp. 14, 74, 189, 528, 573, 582.

Table G3 [Automobile Labour Productivity]: As noted above for Tables G1 and G2, with 1958 passenger automobile production from *Stats, 1967,* p. 312.

Table H1 [Textiles Production]: Source Key: (A) *Growth, 1968*; (B) *Yearbook, 1976;* (C) *Industrial, 1984;* (D) OECD, Dep't of Economics and Statistics (1987b), p. 34; (E) *Growth, 1938-61*; (F) Growth, *1953-65*; (G) *Yearbook, 1974;* (H) *Yearbook, 1980*; (J) *Growth, 1970;* (K) *Bulletin* (Nov. 1987).

Australia: 1958-66: (A), p. 19; 1966-76: (B), p. 21, and (C), p. 19; 1976-86: (C), *supra,* and (D), *supra.* Canada: 1956-66: (E), p. 106, and (F), p. 53, and (G), p. 70; 1966-76: (B), p. 84, and (C), p. 80; 1976-86: (C), *supra,* and (D), *supra.* France: 1956-66: (E), p. 273, and (F), p. 235, and (G), p. 166; 1966-76: (B), p. 183, and (C), p. 193; 1976-86: (C), *supra,* and (D), *supra.* Japan: 1956-65 (reflecting clothing as well): (E), p. 458, and (F), p. 417, and (G), p. 292; 1966-76: (B), p. 318, and (C), p. 317; 1976-84: (C), *supra,* and (D), *supra.* Sweden: 1956-66: (E), p. 699, and (F), p. 417, and (G), p. 530, ; 1966-76: (B), p. 570, and (C), p. 534; 1976-86: (C), *supra,* and (D), *supra.* U.K.: 1956-66: (E), p. 782, and (F), p. 455, and (G), p. 580; 1966-76: (B), p. 613, and (C), p. 579, and (H), p. 546; 1976-86: (C), *supra,* and (D), *supra.* U.S.: 1956-66: (E), p. 808, and (F), p. 462, and (G), p. 596; 1966-76: (B), p. 634, and (C), p. 588; 1976-86: (C), *supra,* and (D), *supra.* W. Germany: 1956-66: (E), p. 303, and (F), p. 157, and (G), p. 181; 1966-76: (B), p. 199, and (C), p. 215; 1976-86: (C), *supra,* and (D), *supra.* Developed and Developing Economies: (K), pp. 260-261. World: 1958-66: (J), p. 524; 1966-76: *Ibid.,* and (H), p. 588; 1976-86: (H), p. 588, and (K), p. 256.

Table H2 [Employment in Textiles Mfg.]: 1956: *Growth, 1938-61,* Table 3C, p. 32, and Table 2C, p. 29; Table 4C, p. 113, and Table 3C, p. 108; Table 5C, p. 278, and Table 3C, p. 275; Table 4C, p. 462, and Table 3B, p.

460; Table 5C, p. 706, and Table 3C, p. 701; Table 5C, p. 789, and Table 3C, p. 784; Table 4B, p. 813, and Table 3C, p. 810; Table 6C, p. 311, and Table 3C, p. 304 [note: textiles employment in the Saar was negligible--Table 5, p. 322]; (A) *Growth, 1970*, p. 539. 1966: (A), *supra,* pp. 17, 63, 162, 258, 443, 491, 502, 174, 539. 1976: *Yearbook, 1980,* pp. 14, 74, 172, 284, 496, 540, 549, 191, 601; (A), *supra,* p. 539; (B) *Industrial, 1984,* p. 631. 1984 [or nearest year thereto]: (B), pp. 14, 74, 189, 311, 528, 573, 582, 208, and 631.

Table H3 [Textiles Labour Productivity]: As noted above for Tables H1 and H2, with 1984 production from OECD, Dep't of Economics and Statistics (1987b), p. 34

Table J1 [Clothing Production]: *Source Key:* (A) *Growth, 1970;* (B) *Growth, 1953-65*; (C) *Yearbook, 1974;* (D) *Yearbook, 1976*; (E) *Industrial, 1984;* (F) OECD, Dep't of Economics and Statistics (1987b), p. 36; (G) *Growth, 1968;* (H) *Yearbook, 1980.*

Australia: 1958-66: (A), p. 22, and (B), p. 10, and (C), p. 17; 1966-76: (D), p. 21, and (E), p. 19; 1976-86: (E), *supra,* and (F), *supra.* Canada: 1958-66: (B), p. 53, and (C), p. 70; 1966-76: (D), p. 84, and (E), p. 80; 1976-86: (E), *supra,* and (F), *supra.* France: 1958-66: (G), p. 116; 1966-76: (D), p. 183, and (E), p. 193; 1976-86: (E), *supra,* and (F), *supra.* Japan: 1958-65 (reflecting textiles as well): (B), p. 285; 1966-76: (D), p. 318, and (E), p. 317; 1976-84: (E), *supra,* and (F), *supra.* Sweden: 1958-66: (B), p. 417, and (C), p. 530; 1966-76: (D), p. 570, and (E), p. 534; 1976-86: (E), *supra,* and (F), *supra.* U.K.: 1958-66: (B), p. 455, and (C), p. 580; 1966-76: (D), p. 613, and (E), p. 579; 1976-86: (E), *supra,* and (F), *supra.* U.S.: 1958-66: (B), p. 462, and (C), p. 596; 1966-76: (D), p. 634, and (E), p. 588; 1976-86: (E), *supra,* and (F), *supra.* W. Germany: 1958-66: (B), p. 157, and (C), p. 181; 1966-76: (D), p. 199, and (E), p. 215; 1976-86: (E), *supra,* and (F), *supra.*

Table J2 [Employment in Clothing Mfg.]: 1958 (except France, Sweden and the U.K.): *Growth, 1967,* pp. 9, 43, 238, 275; (Sweden and the U.K.): *Growth, 1953-65,* Table 13, p. 422, and p. 418; Table 13, p. 460, and p. 456. 1966: *Growth, 1970,* pp. 17, 63, 162, 258, 443, 491, 502, 174. 1976: *Yearbook, 1980, pp. 14, 74, 172, 284, 496, 540, 549, 191.* 1984 *[or the closest year thereto]: Industrial, 1984,* pp. 14, 74, 189, 311, 528, 573, 582, and 208.

Table J3 [Labour Productivity in Clothing Mfg.]: As noted above for Tables J1 and J2, with 1965 Japanese employment from *Growth, 1969,* p. 231; and with 1984 production from OECD, Dep't of Economics and Statistics (1987b), p. 34.

Table K1 [Footwear Production]:

Table K2 [Footwear Employment]:

Table K3 [Labour Productivity in Footwear Mfg.]:

Table M1 [Reductions in Shipbuilding Capacity]: OECD, Directorate for Science, Technology and Industry (1987a), p. 31.

Table M2 [Changes in Employment in Certain "Declining" Industries]: Lawrence (1988), p. 50, Table 2.

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